STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3
AMENDED REPORT ☑

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER IWM SWD 3-30 B4	
2. TYPE OF WORK DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○	**3. FIELD OR WILDCAT** ALTAMONT
4. TYPE OF WELL Water Disposal Well Coalbed Methane Well: NO	**5. UNIT or COMMUNITIZATION AGREEMENT NAME**
6. NAME OF OPERATOR INTEGRATED WATER MANAGEMENT LLC	**7. OPERATOR PHONE** 435 722-3555
8. ADDRESS OF OPERATOR PO Box 816, Roosevelt, UT, 84066	**9. OPERATOR E-MAIL** rballou@stratanet.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) 3691	**11. MINERAL OWNERSHIP** FEDERAL ○ INDIAN ○ STATE ○ FEE ◉
12. SURFACE OWNERSHIP FEDERAL ○ INDIAN ○ STATE ○ FEE ◉	
13. NAME OF SURFACE OWNER (if box 12 = 'fee') Integrated Water Management	**14. SURFACE OWNER PHONE (if box 12 = 'fee')** 435-454-4646
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee') PO Box 430, Altamont, UT 84001	**16. SURFACE OWNER E-MAIL (if box 12 = 'fee')** rballou@stratanet.com
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	**18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS** YES ○ (Submit Commingling Application) NO ◉
19. SLANT VERTICAL ◉ DIRECTIONAL ○ HORIZONTAL ○	

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	300 FSL 800 FEL	SESE	30	2.0 S	4.0 W	U
Top of Uppermost Producing Zone	300 FSL 800 FEL	SESE	30	2.0 S	4.0 W	U
At Total Depth	300 FSL 800 FEL	SESE	30	2.0 S	4.0 W	U

21. COUNTY DUCHESNE	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 300	**23. NUMBER OF ACRES IN DRILLING UNIT** 90
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1632	**26. PROPOSED DEPTH** MD: 5500 TVD: 5500
27. ELEVATION - GROUND LEVEL 1632	**28. BOND NUMBER** RLB0013838	**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE** Integrated Facility

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
SURF	12.25	9.625	0 - 500	32.3	J-55 ST&C	9.0	Class G	230	1.15	15.8
I1	8.75	7	0 - 5500	23.0	J-55 LT&C	9.0	Premium Lite High Strength	320	1.69	13.1

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	☑ COMPLETE DRILLING PLAN
☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	☑ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	☑ TOPOGRAPHICAL MAP

NAME Robert Ballou	**TITLE** President	**PHONE** 435 722-3555
SIGNATURE	**DATE** 05/04/2011	**EMAIL** rballou@stratanet.com

API NUMBER ASSIGNED
43013507530000

APPROVAL

Permit Manager

RECEIVED: Jun. 07, 2011

INTEGRATED WATER MANAGEMENT

IWM SWD 3-30 B4

SE/SE SECTION 30, 2S 4W DUCHESNE CO., UT

Surface owner: Integrated Water Management

PO Box 430 Altamont, UT 84001

435-454-4646

DRILLING PROGRAM

1 GEOLOGIC SURFACE FORMATION:

Duchesne River Formation of Oligocene Age.

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS OR FMS.

Duchesne River Fm 0-1500'

Uintah Fm 1500-2500'

Green River 2500-5500'

3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS

Fresh water may be encountered in the Duchesne river Fm, but would not be expected below about 350', no economic oil or gas anticipated. All production in area > 8000'. Well is being drilled to encounter sands suitable for injecting as SWD well.

4. PROPOSED CASING /CEMENTING PROGRAM

Casing Design
IWM SWD 3-30
B4

Size	Interval		Weight	Grade	Coupling	Design Factors		
	Top	Bottom				Burst	Collapse	Tension
Surface Casing 9-5/8"	0	500'	32.3#	J55	STC	2,950	2020	211000
Prod Casing 7"	0	5500	23#	J55	LTC	4,810	3270	366,000

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Assumptions:
1. Surface casing max anticipated surface press (MASP)= Frac gradient-Gas gradient
2. Prod casing MASP (Production mode)=pore pressure-gas gradient
3. All collapse calculations assume fully evacuated casing w/gas gradients
4. All tension calculations assume air weight

All casing shall be new or, if used, inspected and tested. Used casing shall meet or exceed API standards for new casing.

All casing shall have a minimum of 1 (one) centralizer on each of the bottom three (3) joints

Cementing Design IWM SWD 3-30 B4

Job	Fill	Description	Sacks / Ft^3	OH Excess*	Weight (ppg)	Yield (ft^3/sk)
Surface Casing	500'	Class G W/2% CaCl	230	30%	15.8	1.15
Prod Casing Lead	3500	Prem Lite II W/10% gel + 3% KCL	320	30%	13.1	1.69
Prod Casing Tail	2000	50/50 Poz W/2% gel + 3% KCL	360	30%	14.2	1.26

1. Actual volume pumped will be 15% over the caliper log
2. Compressive strength of lead cement: 1800 PSI @ 24hrs, 2250 psi @ 72 hrs
3. Compressive strength of tail cement 2500 psi @ 24 hrs

Hole Sizes: a 12 1/4" hole will be drilled for the 9-5/8" surface casing. A 8 3/4" hole will be drilled for the 7" production casing.

The 9-5/8" surface casing shall in all cases be cemented back to surface. In the event that during the primary surface cementing operations the cement does not circulate to surface, or if the cement level should fall back more than 8 feet from surface , then a remedial surface cementing operation shall be performed to insure adequate isolation and stabilization of the surface casing.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

The operator's minimum specifications for pressure control equipment are as follows:

An 8" Double Ram Hydraulic unit with a closing unit will be utilized. Function test of BOP's will be checked on a daily basis.

Refer to Exhibit C for a diagram of BOP equipment that will be utilized on this well.

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6. TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:

Well will be drilled with water/gel. No high pressures are anticipated in the drilling of this well to depth.

7. AUXILIARY SAFETY EQUIPMENT TO BE USED:

Auxiliary safety equipment will be Kelly Cock, bit float, and a TIW valve with drill pipe threads.

8. TESTING, LOGGING AND CORING PROGRAMS:

The logging program will consist of a triple combination Dual Induction/Density-Neutron with GR and Caliper log from TD to 3500'. A Cement Bond Log will be run from PBTD to cement top. No DST or coring will be done.

9. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:

No abnormal temperatures or pressures are anticipated. No Hydrogen sulfide has been encountered or is known to exist from previous drilling in the area to this depth. Maximum anticipated borehole pressure will approximately equal total depth in feet multiplied by a 0.433 psi/foot gradient.

10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:

It is anticipated that the drilling operation will commence in the second quarter of 2011 and take approximately seven (7) days from spud to rig release.

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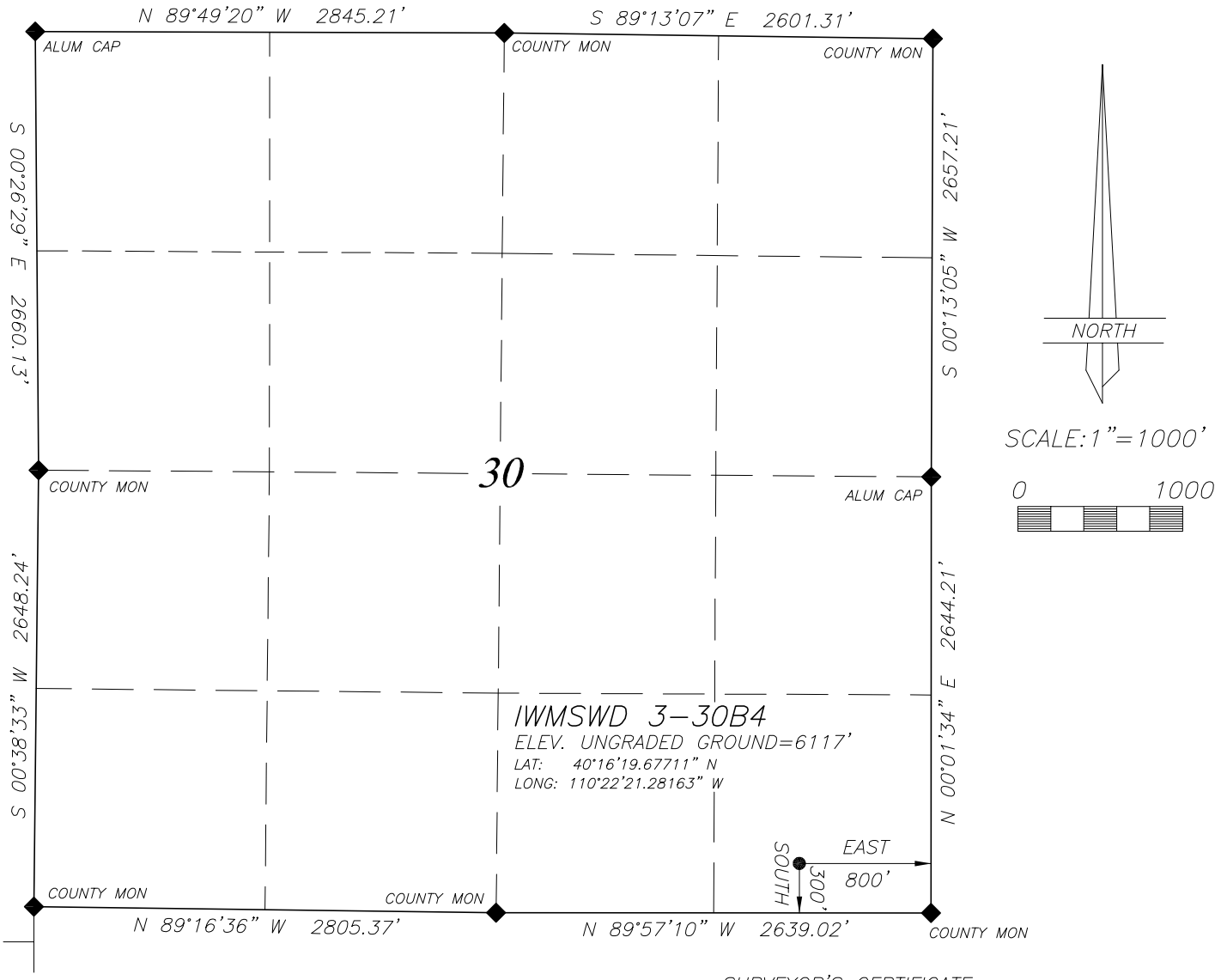
API Well Number: 43013507530000

INTEGRATED WATER MANAGEMENT

WELL LOCATION

IWMSWD 3–30B4

LOCATED IN THE SE¼ OF THE SE¼ OF SECTION 30, T2S, R4W, U.S.B.&M. DUCHESNE COUNTY, UTAH



LEGEND AND NOTES

◆ CORNER MONUMENTS FOUND AND USED BY THIS SURVEY

THE GENERAL LAND OFFICE (G.L.O.) PLAT WAS USED FOR REFERENCE AND CALCULATIONS AS WAS THE U.S.G.S. MAP

THIS SURVEY WAS PERFORMED USING GLOBAL POSITIONING SYSTEM PROCEDURES AND EQUIPMENT

THE BASIS OF BEARINGS IS GEODETIC NORTH DERIVED FROM G.P.S. OBSERVATIONS AT THE SECTION CORNER LOCATED AT LAT. 40°15'22.90258"N AND LONG. 110°23'21.19760"W USING THE UTAH STATE G.P.S. VIRTUAL REFERENCE STATION CONTROL NETWORK MAINTAINED AND OPERATED BY THE AUTOMATED GEOGRAPHIC REFERENCE CENTER

BASIS OF ELEVATIONS: NAVD 88 DATUM USING THE UTAH REFERENCE NETWORK CONTROL SYSTEM

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM THE FIELD NOTES AND ELECTRONIC DATA COLLECTOR FILES OF AN ACTUAL SURVEY PERFORMED BY ME, OR UNDER MY PERSONAL SUPERVISION, DURING WHICH THE SHOWN MONUMENTS WERE FOUND OR REESTABLISHED.

PROFESSIONAL LAND SURVEYOR
No. 148951
JERRY D. ALLRED
3 MAY 2011
STATE OF UTAH

Jerry D. Allred

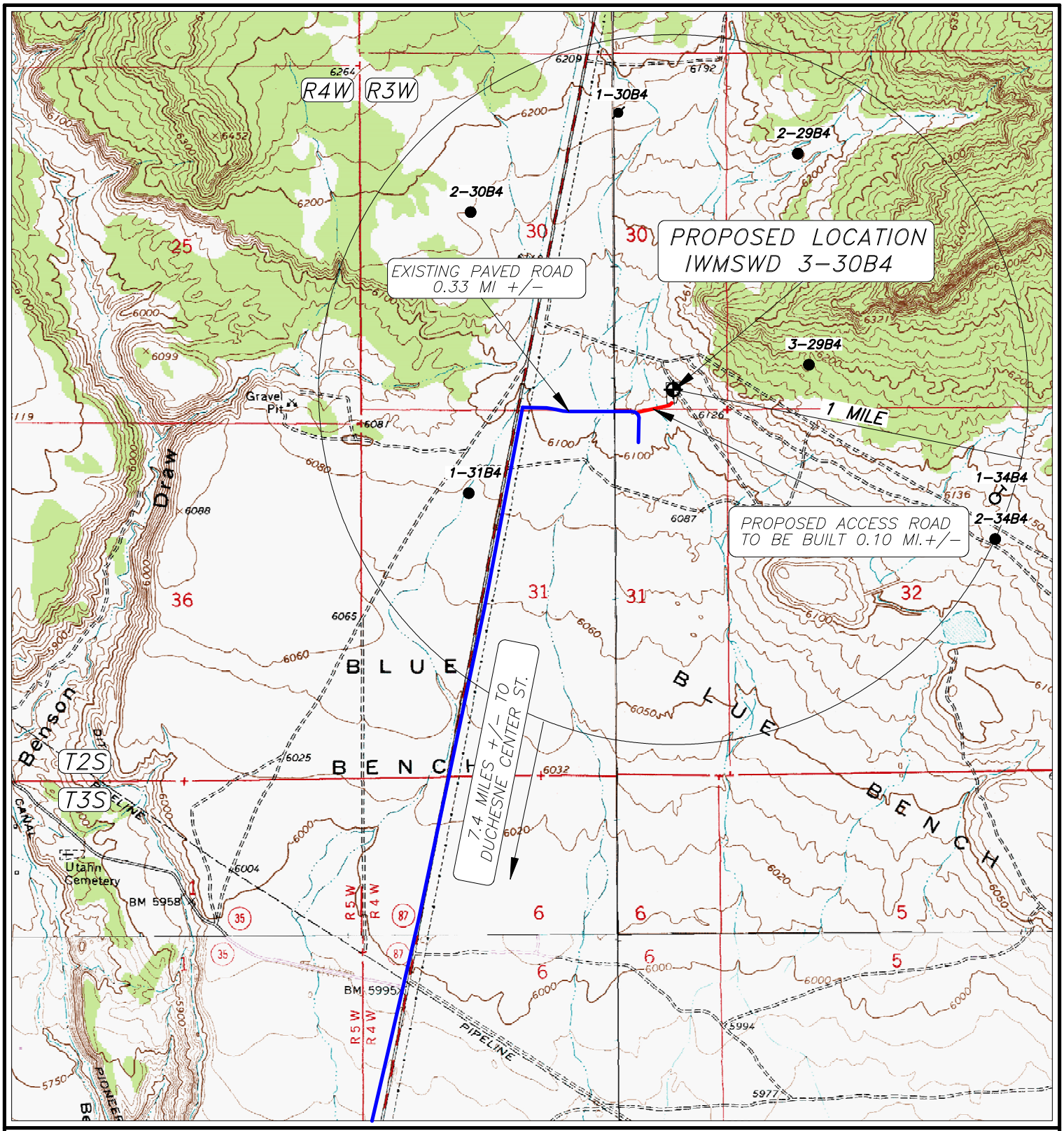
JERRY D. ALLRED, REGISTERED LAND SURVEYOR, CERTIFICATE NO. 148951 (UTAH)

JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS
1235 NORTH 700 EAST--P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738-5352

3 MAY 2011 11–100–016

RECEIVED: Jun. 07, 2011

API Well Number: 43013507530000



LEGEND:

- PROPOSED WELL LOCATION
- OTHER WELLS AS LOCATED FROM SUPPLIED MAP

11–100–016

JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS
1235 NORTH 700 EAST––P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738–5352

NORTH

INTERGRADED WATER MANAGEMENT

IWMSWD 3–30B4
SECTION 30, T2S, R4W, U.S.B.&M.
300' FSL 800' FEL

TOPOGRAPHIC MAP "C"

SCALE; 1"=2000'
29 APR 2010

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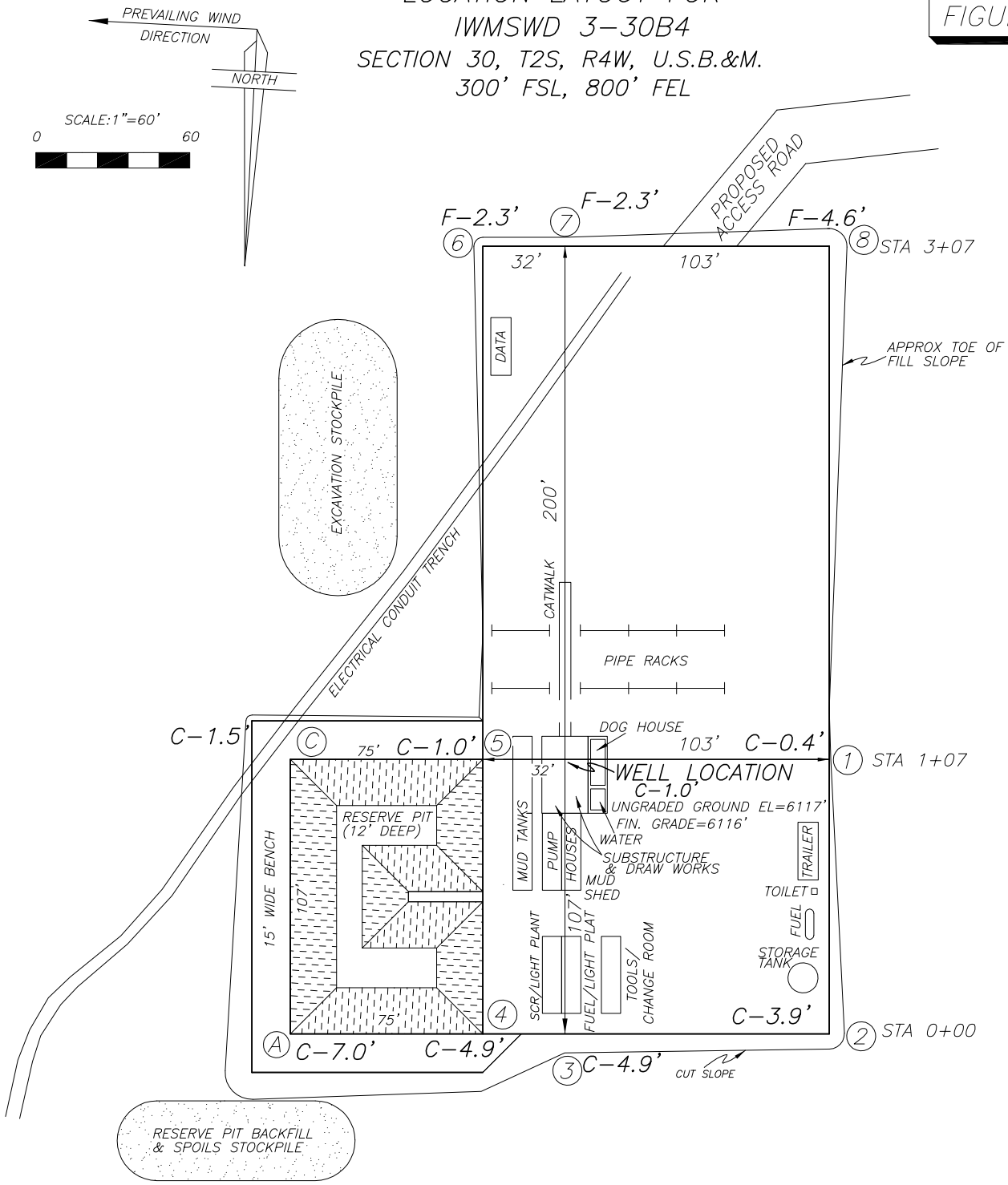
INTEGRATED WATER MANAGEMENT

LOCATION LAYOUT FOR
IWMSWD 3-30B4
SECTION 30, T2S, R4W, U.S.B.&M.
300' FSL, 800' FEL

FIGURE #1



PROFESSIONAL LAND SURVEYOR
No. 148951
JERRY D. ALLRED
3 MAY 2011
STATE OF UTAH

Jerry D. Allred

JERRY D. ALLRED & ASSOCIATES
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1235 NORTH 700 EAST--P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738-5352

3 MAY 2011 11-100-016

RECEIVED: Jun. 07, 2011

FORM 5

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

DESIGNATION OF AGENT OR OPERATOR

The undersigned is, on record, the holder of oil and gas lease

LEASE NAME: Integrated Water Management

LEASE NUMBER: _____

and hereby designates

NAME: Robert Ballou

ADDRESS: 849 Canyon View Drive # 416-3

city Roosevelt state UT zip 84066

as his (check one) agent ☑ / operator ☐, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Division Director or Authorized Agent may serve written or oral instructions in securing compliance with the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah with respect to:

(Describe acreage to which this designation is applicable. Identify each oil and gas well by API number and name. Attach additional pages as needed.)

SE/SE Section 30 2S 4W Duchesne, Co. Utah; IWM SWD 3-30 B4

It is understood that this designation of agent/operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah. It is also understood that this designation of agent or operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated agent/operator, the lessee will make full and prompt compliance with all rules, lease terms or orders of the Board of Oil, Gas and Mining of the State of Utah or its authorized representative.

The lessee agrees to promptly notify the Division Director or Authorized Agent of any change in this designation.

Effective Date of Designation: 05/04/2011

BY: (Name) Robert Ballou

(Signature) Robert Ballou

(Title) President

(Phone) (435) 722-3555

OF: (Company) Integrated Water Management

(Address) PO Box 430

city Altamont

state UT zip 84001

(5/2000)

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Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066
Office 435-722-3555 Fax 435-722-3556 Cell 435-724-2500
rballou@stratanet.com

May 4, 2011

Re: APD Materials for proposed SWD well IWM SWD 3-30B4

Attention Brad Hill:

Brad:
Enclosed is the APD form 3 along with support material as outlined and discussed. I scanned the materials as discussed and included them as part of the e filing.

Included in this package is a 10 point drilling plan and a surface use plan with supporting documentation.

Prior to submitting this package, on April 8th 2011, two hard copies of an associated SWD permit was sent to the DOGM offices for processing. As discussed it is understood that a final permit and operations established cannot be done until the well is drilled and tested. As discussed, if after review notices could be sent for publication and review it would make possible that upon completion of the drilling and testing of the well we could start operations.

Please do not hesitate to call with any questions or comments.

Bob Ballou
enc.

'APIWellNo:43013500370000'

2-M SYSTEM

Blowout Prevention Equipment Systems

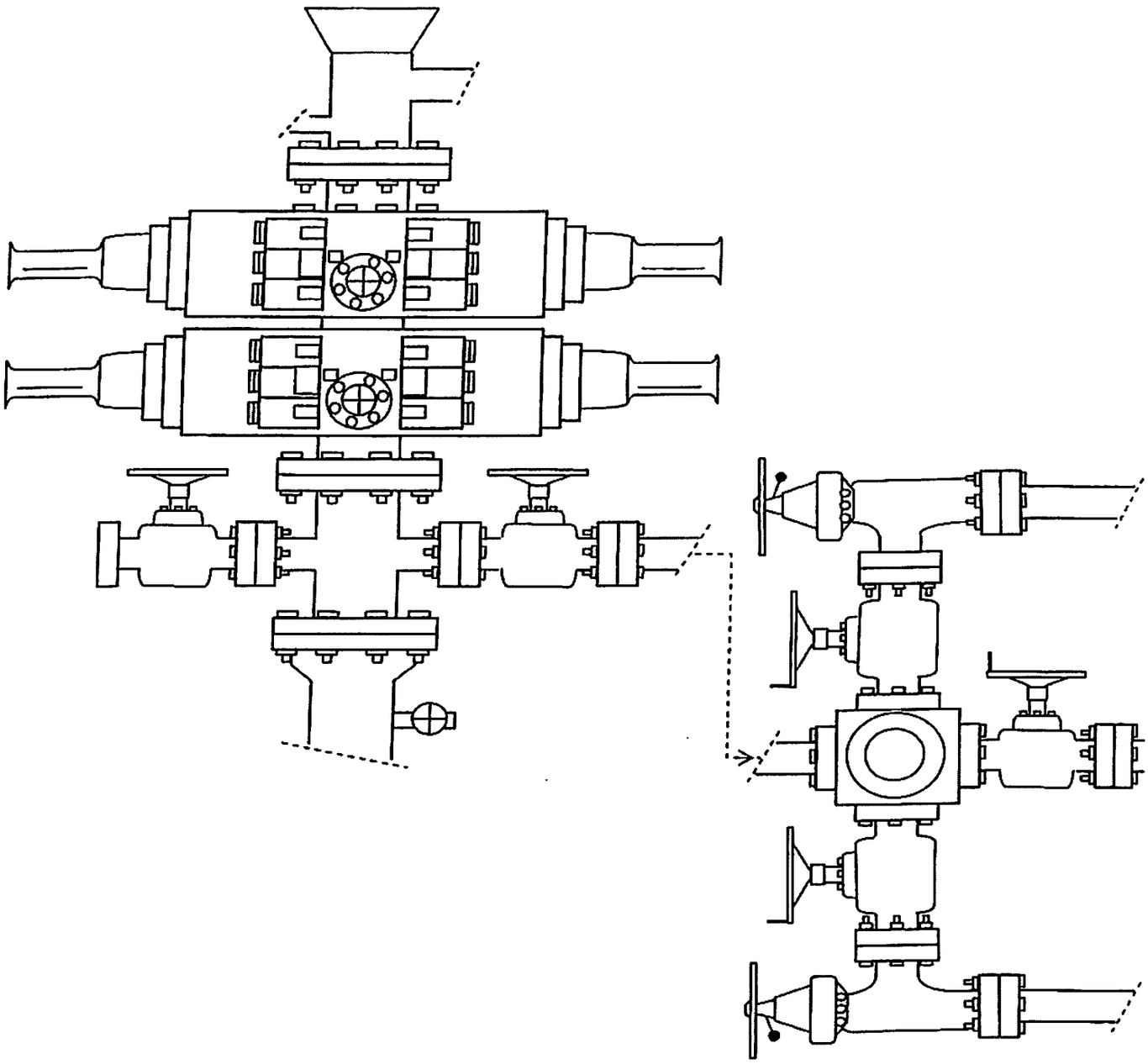

EXHIBIT C

RECEIVED: Jun. 07, 2011

elpaso Exploration & Production

April 28, 2011

Mr. Brad Hill
State of Utah
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Letter of No Objection to Hardline Exception
Integrated Water Management Saltwater Disposal Well #3-30B4
SE/4SE/4 of Section 30, Township 2 South, Range 4 West
Duchesne County, Utah

Mr. Hill,

El Paso, as offset operator, has no objection to Integrated Water Management drilling a saltwater disposal well, the IWM SWD 3-30B4, to be located 800' from the east line and 300' from the south line of Section 30, Township 2 South, Range 4 West, Duchesne County, Utah, at the proposed injection interval of 4,000' – 5,500' and with a maximum injection pressure as deemed acceptable to the Division of Oil, Gas and Mining.

If you have any questions, please call me at 303-291-6422.

Very truly yours,

El Paso E&P Company, L.P.

Catherine L. Hammock

Catherine L. Hammock
Sr. Staff Landman – Altamont Business Area

El Paso E&P Company, L.P.
1099 18th Street, Suite 1900 Denver, Colorado 80202
tel 303.291.6400 fax 303.291.6487

RECEIVED: Jun. 07, 2011

Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066
Office 435-722-3555 Fax 435-722-3556 Cell 435-724-2500
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Please do not hesitate to call with any questions or comments.

Bob Ballou
enc.

API Well Number: 43013507530000

FORM 3

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO:	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL ☑ REENTER ☐ DEEPEN ☐	7. IF INDIAN, ALLOTTEE OR TRIBE NAME:
B. TYPE OF WELL: OIL ☐ GAS ☐ OTHER SWD SINGLE ZONE ☑ MULTIPLE ZONE ☐	8. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: Integrated Water Management	9. WELL NAME and NUMBER: IWM SWD 3-30 B4
3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001 PHONE NUMBER: (435) 454-4646	10. FIELD AND POOL, OR WILDCAT:
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 800' FEL 300' FSL AT PROPOSED PRODUCING ZONE: 4000'-5500' (Injection Interval)	11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 2S 4W
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 8 miles north and one mile east of Duchesne, UT	12. COUNTY: Duchesne 13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): 300'	16. NUMBER OF ACRES IN LEASE: 17. NUMBER OF ACRES ASSIGNED TO THIS WELL:
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): 1632', Christman Blann 1-31 B4	19. PROPOSED DEPTH: 5,500 20. BOND DESCRIPTION:
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): Gr 6128'	22. APPROXIMATE DATE WORK WILL START: 23. ESTIMATED DURATION:

PROPOSED CASING AND CEMENTING PROGRAM

24.

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4"	9 5/8" J55 32.3#	500	Class G 230 sks
8 3/4"	7" J55 23#	5,500	Prem Lite, 50/50 poz

ATTACHMENTS

25.

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☑ COMPLETE DRILLING PLAN
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Robert Ballou TITLE PG- Consulting Geologist

SIGNATURE Robert Ballou DATE 4/28/2011

(This space for State use only)

API NUMBER ASSIGNED: _____ APPROVAL:

(11/2001) (See Instructions on Reverse Side)

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SURFACE USE PLAN
IWM SWD 3-30 B4

1. Existing Roads:

The well will be accessed from state highway 87. All access roads to the well location are paved county roads.

2. Location of Existing Wells:

The nearest well Is the El Paso Operating Company's Christman Blann 1-31 B4, located approximately 1700' S of the proposed well location. Note: a variance letter from El Paso has been included in the APD materials.

3. Location of Existing and/or proposed Facilities:

There are no existing facilities on the proposed well pad. All proposed facilities will be contained within the existing facilities and the SWD fluid pumped to the well head, (tri-plex pump and filter facility). The well head will be the only visible portion of the SWD well. (see attached Location Layout).

Location and Type of Water Supply:

Water will be taken from facility fresh water tank from permitted fresh water well on premises.

4. Source of Construction Materials:

It is not anticipated that any construction materials will be needed for the drilling phase of this project. Gravel, shale or road base materials needed to upgrade access roads will be obtained from local vendors.

5. Methods for Handling Waste Disposal

Drill cuttings will be buried in the reserve pit

Sewage waste will be contained in portable chemical toilets serviced by a commercial sanitary service.

Garbage and trash will be contained in a trash basket and hauled to a sanitary landfill.

Drilling fluids will be contained in the reserve pit and mud tanks.

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Unusable drilling fluids and water will be disposed of In an approved manner upon the completion of the well.

The reserve pit will be lined with 12 mil plastic nylon reinforced liner Installed over sufficient bedding material to cover any exposed rocks.

The pit will be fenced on three sides with 39" net wire, topped with a minimum of one stand of barbed wire. All wire will be stretched prior to attachment to the corner posts. The fourth side will be fenced when drilling activities are completed to allow drying:

6. Ancillary Facilities:

All living quarters and office facilities will be confined to the drilling location. This will include mobile housing for rig crew, supervisors etc.

7. Site Layout

Refer to "Location Layout" diagram for location of mud tanks, reserve pits, pipe racks, living facilities.

8. Plans for Restoration of the

Surface:

i. Immediately upon well completion the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash and Junk not required for production. The reserve pit will be reclaimed to before drilling specs.

Within 90 days of the date of well completion. Before any dirt work takes place, the reserve pit must be completely dry and all cans, barrels, pipe, etc, removed. The liner win be perforated and torn prior to backfilling,

9. Lessee's or Operator's Representative and Certification:

Robert L. Ballou PG Consulting Geologist

PO Box 430, Altamont, UT 84001

IWM office: 435-454-4646

R.L. Ballou's Office: 435-722-3555 Fax: 435-722-3556

R.L. Ballou's Cell: 435-724-2500

rballou@stratanet.com

I hereby certify that I have inspected the proposed drill site and access road; that I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Integrated Water Management, and its contractors and subcontractors in conformity with the plan and the terms and conditions under which it Is approved.

RECEIVED: Jun. 07, 2011

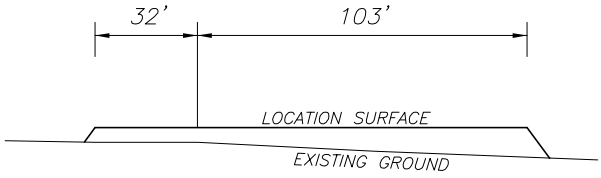
INTEGRATED WATER MANAGEMENT

LOCATION LAYOUT FOR
IWMSWD 3-30B4
SECTION 30, T2S, R4W, U.S.B.&M.
300' FSL, 800' FEL

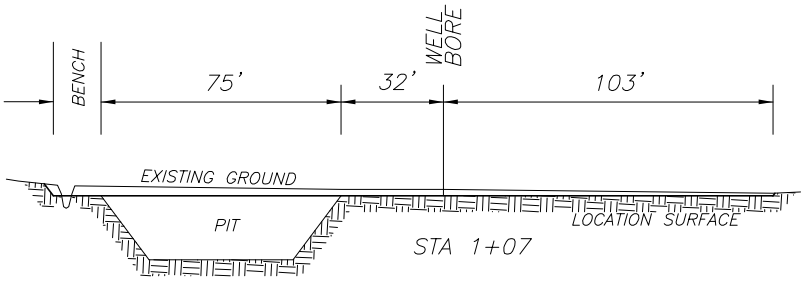
FIGURE #2

1"=30'
X-SECTION SCALE
1"=60'

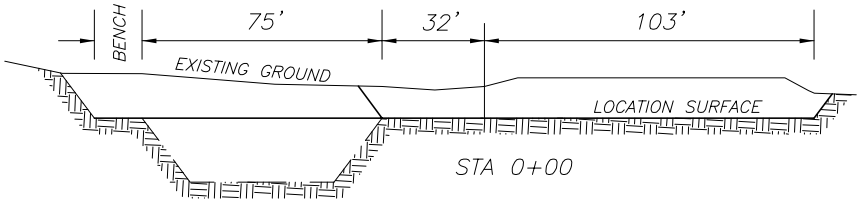
NOTE: ALL CUT/FILL SLOPES ARE 1½:1 UNLESS OTHERWISE NOTED



STA 3+07



STA 1+07



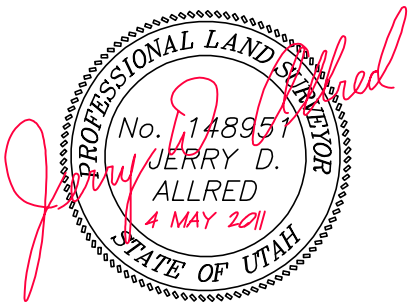
STA 0+00

APPROXIMATE YARDAGES

TOTAL CUT (INCLUDING PIT) = 6153 CU. YDS.

PIT CUT	=	2115 CU. YDS.
TOPSOIL STRIPPING: (6")	=	1089 CU. YDS.
REMAINING LOCATION CUT	=	2949 CU. YDS

TOTAL FILL = 2200 CU. YDS.



JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS
1235 NORTH 700 EAST--P.O. BOX 975
DUCHESNE, UTAH 84021
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4 MAY 2011 11-100-016

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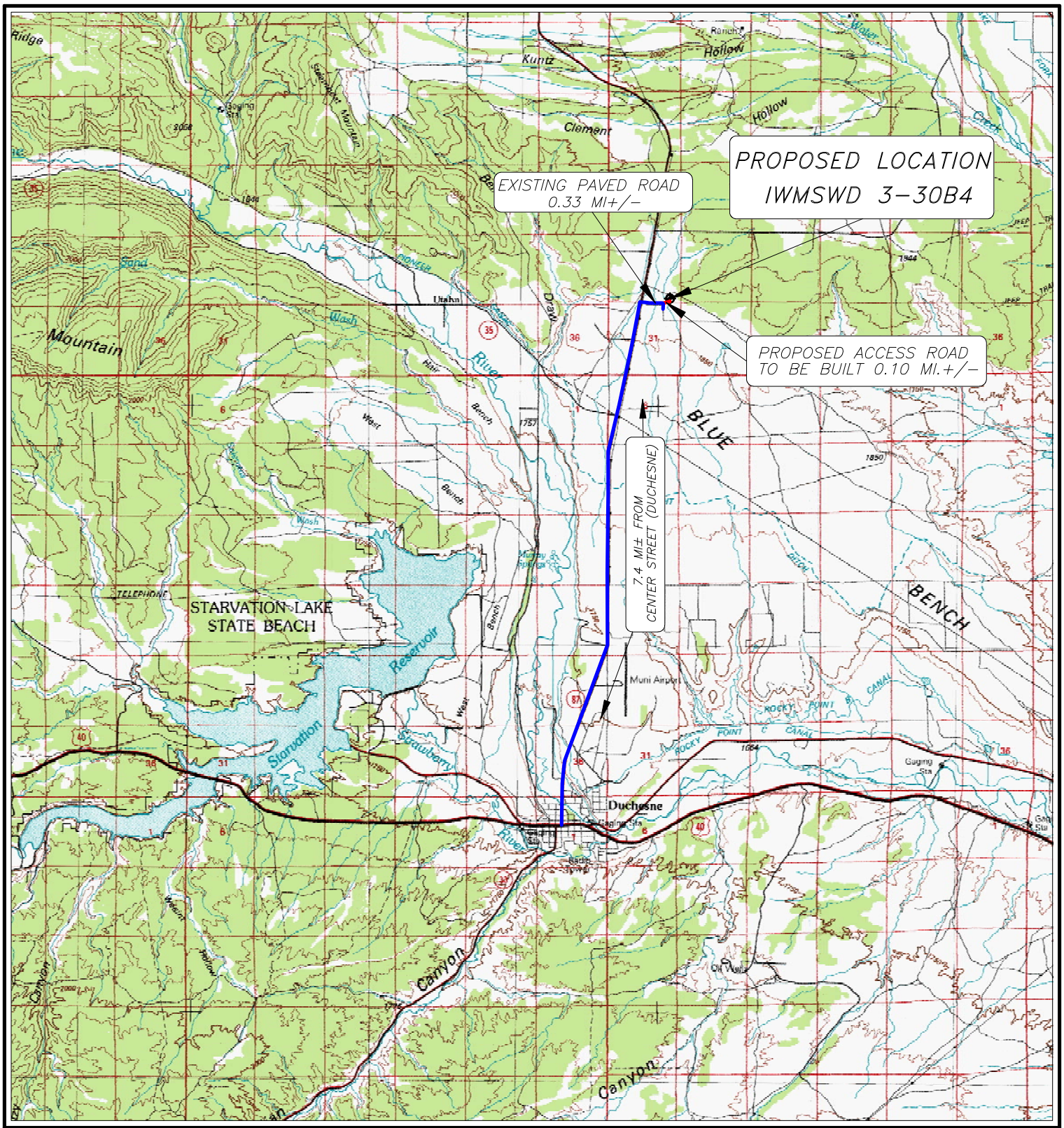


LEGEND:

PROPOSED WELL LOCATION

11-100-016

JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS
1235 NORTH 700 EAST--P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738-5352

NORTH

INTEGRATED WATER MANAGEMENT

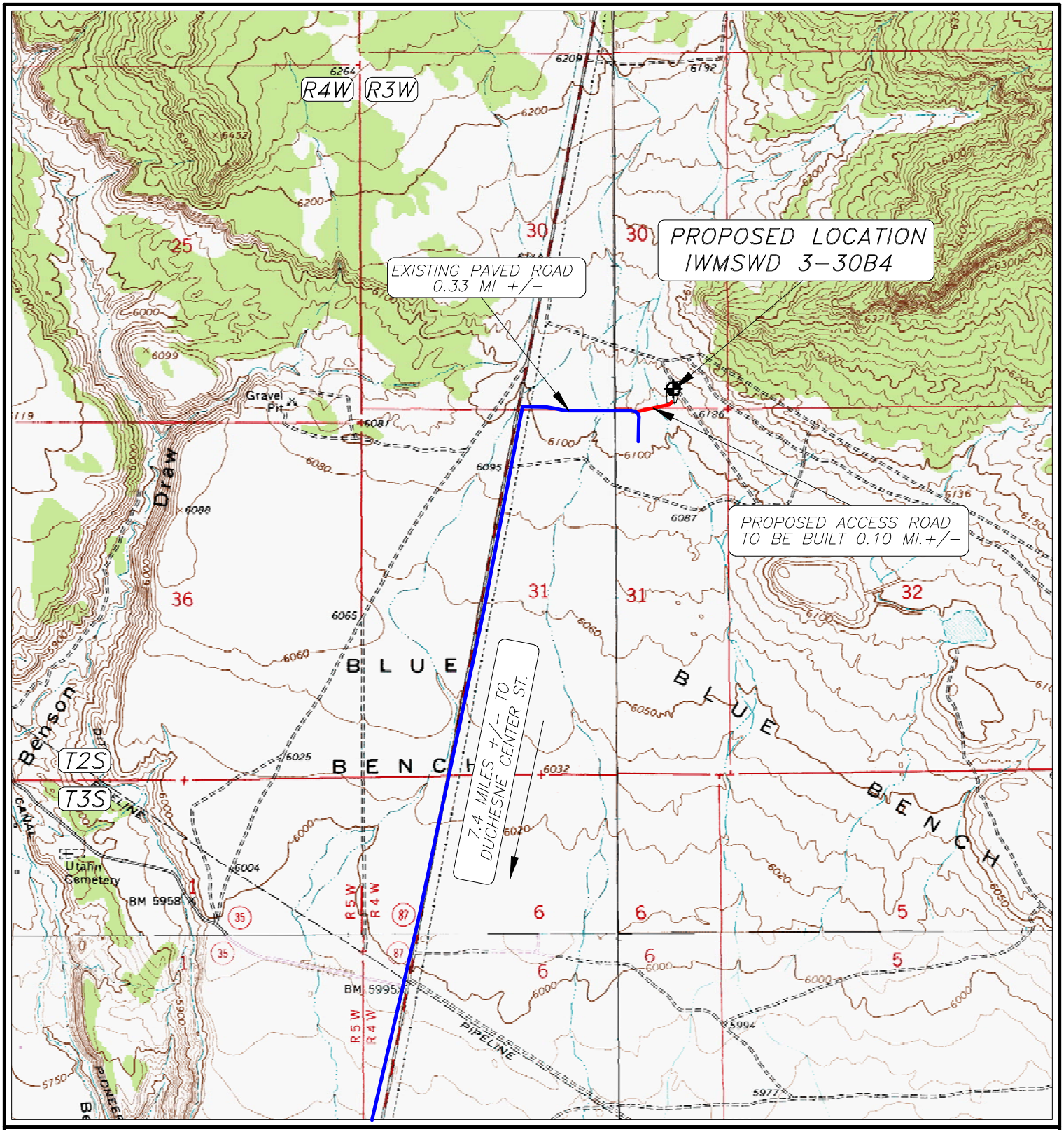
IWMSWD 3-30B4
SECTION 30, T2S, R4W, U.S.B.&M.
300' FSL 800' FEL

TOPOGRAPHIC MAP "A"

SCALE; 1"=10,000'
29 APR 2011

RECEIVED: Jun. 07, 2011

API Well Number: 43013507530000



LEGEND:

- PROPOSED WELL LOCATION
- PROPOSED ACCESS ROAD
- EXISTING GRAVEL ROAD
- EXISTING PAVED ROAD

11-100-016

JERRY D. ALLRED & ASSOCIATES
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(435) 738-5352

NORTH

INTEGRATED WATER MANAGEMENT

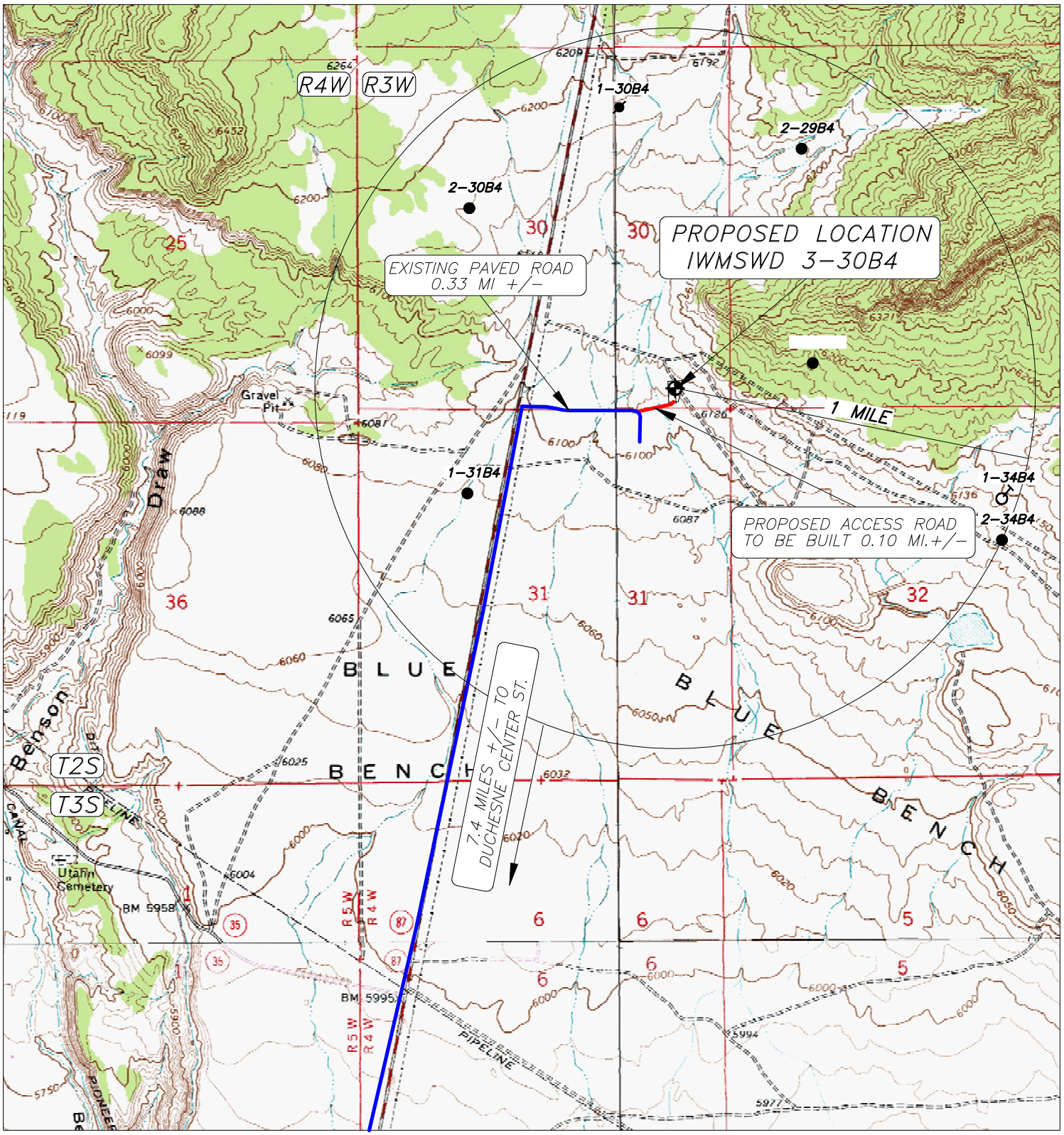
IWMSWD 3-30B4
SECTION 30, T2S, R4W, U.S.B.&M.
300' FSL 800' FEL

TOPOGRAPHIC MAP "B"

SCALE; 1"=2000'
29 APR 2010

RECEIVED: Jun. 07, 2011

API Well Number: 43013507530000



LEGEND:

- PROPOSED WELL LOCATION
- OTHER WELLS AS LOCATED FROM SUPPLIED MAP

11–100–016

JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS
1235 NORTH 700 EAST––P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738–5352

NORTH

INTEGRATED WATER MANAGEMENT

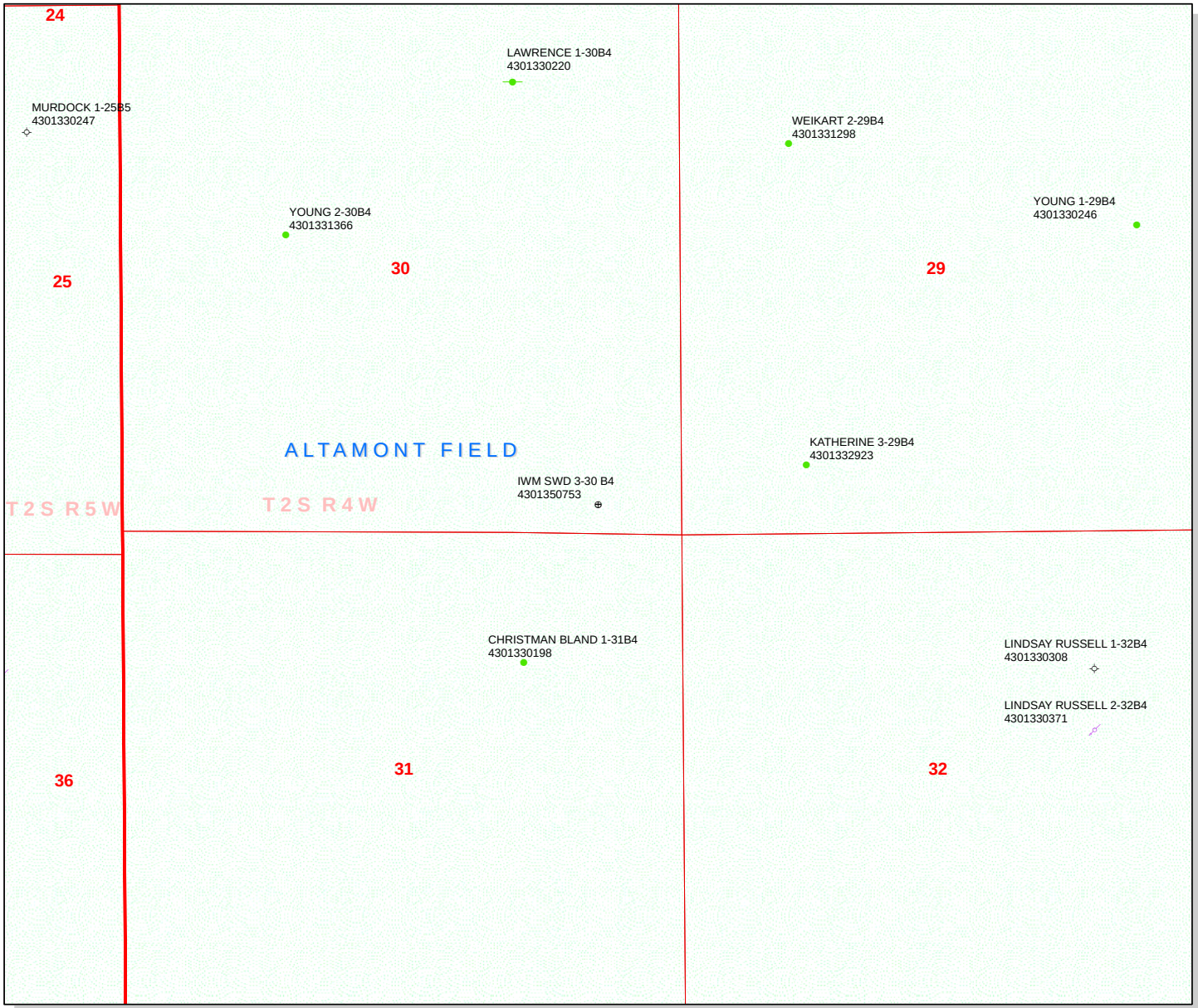
IWMSWD 3–30B4
SECTION 30, T2S, R4W, U.S.B.&M.
300' FSL 800' FEL

TOPOGRAPHIC MAP "C"

SCALE; 1"=2000'
29 APR 2010

RECEIVED: Jun. 07, 2011

API Well Number: 43013507530000



API Number: 4301350753

Well Name: IWM SWD 3-30 B4

Township T0.2 . Range R0.4 . Section 30

Meridian: UBM

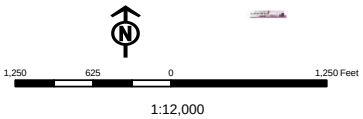
Operator: INTEGRATED WATER MANAGEMENT LLC

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields
STATUS
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED
- Sections
- Township

Wells Query
Status
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well



1:12,000

RECEIVED: Jun. 07, 2011

API Well Number: 43013507530000

BOPE REVIEW INTEGRATED WATER MANAGEMENT LLC IWM SWD 3-30 B4 43013507530000

Well Name	INTEGRATED WATER MANAGEMENT LLC IWM SWD 3-30 B			
String	Surf	I1		
Casing Size(")	9.625	7.000		
Setting Depth (TVD)	500	5500		
Previous Shoe Setting Depth (TVD)	0	500		
Max Mud Weight (ppg)	9.0	9.0		
BOPE Proposed (psi)	0	2000		
Casing Internal Yield (psi)	2270	4360		
Operators Max Anticipated Pressure (psi)	2365	8.3		

Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	234	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	174	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	124	NO Reasonable depth
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	124	NO
Required Casing/BOPE Test Pressure=		500	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	2574	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	1914	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1364	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1474	NO Reasonable
Required Casing/BOPE Test Pressure=		2000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		500	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi

RECEIVED: Jun. 07, 2011

***Max Pressure Allowed @ Previous Casing Shoe=**		psi *Assumes 1psi/ft frac gradient

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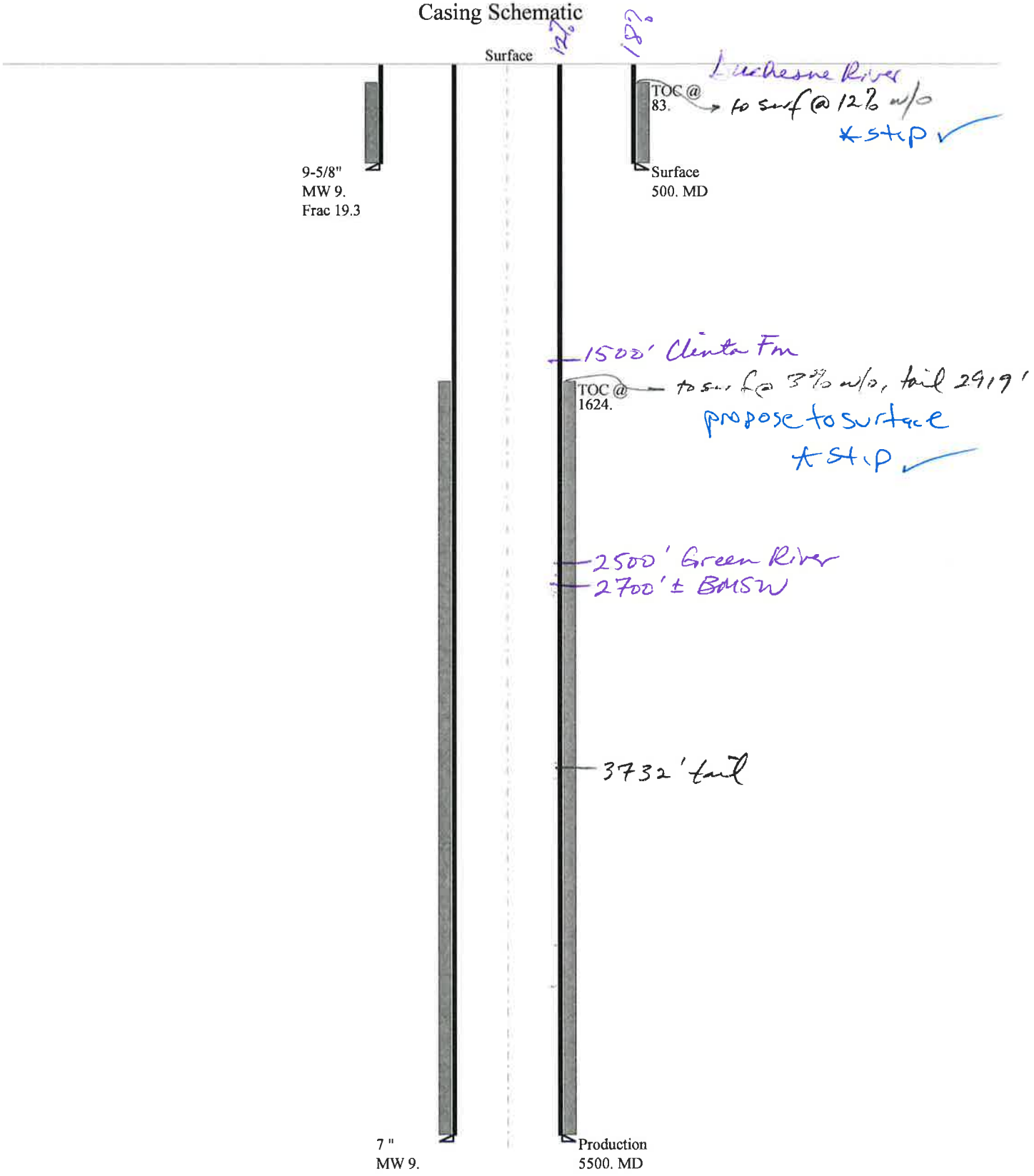
43013507530000 IWM SWD 3-30 B4

Casing Schematic



RECEIVED: Jun. 07, 2011

Well name:	**43013507530000 IWM SWD 3-30 B4**
Operator:	**INTEGRATED WATER MANAGEMENT LLC**
String type:	Surface
Project ID:	43-013-50753
Location:	DUCHESNE COUNTY

Design parameters:

Collapse
Mud weight: 9.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 440 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 500 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 434 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 81 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 83 ft

Non-directional string.

Re subsequent strings:
Next setting depth: 5,500 ft
Next mud weight: 9.000 ppg
Next setting BHP: 2,571 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 500 ft
Injection pressure: 500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	500	9.625	32.30	H-40	ST&C	500	500	8.876	4134

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	234	1370	5.862	500	2270	4.54	16.1	254	15.73 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: May 26,2011
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 500 ft, a mud weight of 9 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

RECEIVED: Jun. 07, 2011

Well name:	**43013507530000 IWM SWD 3-30 B4**
Operator:	**INTEGRATED WATER MANAGEMENT LLC**
String type:	Production
Project ID:	43-013-50753
Location:	DUCHESNE COUNTY

Design parameters:

Collapse
Mud weight: 9.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 1,361 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 2,571 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on air weight.
Neutral point: 4,756 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 151 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: 1,624 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	5500	7	23.00	J-55	LT&C	5500	5500	6.25	28858

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2571	3270	1.272	2571	4360	1.70	126.5	313	2.47 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: May 26,2011
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 5500 ft, a mud weight of 9 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

RECEIVED: Jun. 07, 2011

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	INTEGRATED WATER MANAGEMENT LLC				
Well Name	IWM SWD 3-30 B4				
API Number	43013507530000	**APD No**	3691	**Field/Unit**	ALTAMONT
Location: 1/4,1/4	SESE **Sec** 30 **Tw** 2.0S	**Rng** 4.0W	300 FSL	800 FEL	
GPS Coord (UTM)	553408 4457948	**Surface Owner**	Integrated Water Management		

Participants

Floyd Bartlett (DOGM), Robert Ballou and Nathan Robinson (Integrated Water Management, LLC.)

Regional/Local Setting & Topography

The proposed IWMSWD 3-30B4 salt water injection well is on Blue Bench approximately 7.7 miles north of Duchesne, Duchesne County, Utah. Paved County roads lead to the site except for approximately 0.1 mile of private road which will be upgraded. Blue Bench, which begins about 1 mile north of Duchesne, is an expansive bench bordered by the breaks into the Strawberry River on the west and the Duchesne River to the east. Except for a few rolling to moderately steep hills, the topography is quite flat with a gentle slope to the south. On the edges of the bench, steep draws or side hills form leading to the drainages below. Some dwellings and limited commercial sites are scattered on the bench with most concentrated along Utah Highway 87 which runs from Duchesne to Altamont. No streams, springs or seeps are known to exist in the general area. It is expected that water for developed sites is obtained from individual water wells.

Surface Use Plan

Current Surface Use
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.1	**Width** 225 **Length** 307	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

The site is barren of vegetation, having been removed with the present use.

Soil Type and Characteristics

Deep sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

RECEIVED: Jun. 07, 2011

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? N **Paleo Potental Observed?** N **Cultural Survey Run?** N **Cultural Resources?** N

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)	>1320	0	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations	10 to 30	10 to 30	
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	26	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned on the north east corner of the location in an area of cut. Dimensions are 75’ x 107' x 12 feet deep. A 15 foot wide outer bench is planned. Excavations completed in the general area indicate that the total depth will be in sand with little gravel. Sensitivity Level 1. A liner with a minimum thickness of 12-mils is required. A sub-liner or cushion may not be needed.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 12 **Pit Underlayment Required?**

Other Observations / Comments

Floyd Bartlett	5/16/2011
Evaluator	**Date / Time**

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Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
3691	43013507530000	LOCKED	WD	P	No

Operator	INTEGRATED WATER MANAGEMENT LLC	**Surface Owner-APD**	Integrated Water Management
Well Name	IWM SWD 3-30 B4	**Unit**	
Field	ALTAMONT	**Type of Work**	DRILL
Location	SESE 30 2S 4W U 300 FSL 800 FEL	GPS Coord (UTM)	553401E 4457948N

Geologic Statement of Basis

Integrated proposes to set 500 feet of surface casing which will be cemented to surface. The surface hole will be drilled utilizing fresh water mud. The estimated depth to the base of moderately saline ground water is 2,700 feet. A search of Division of Water Rights records indicates that there are 18 water wells within a 10,000 foot radius of the center of Section 30. These wells range in depth from 150-540 feet. Average depth is approximately 400 feet. The wells are listed as being used for irrigation, stock watering, oil exploration, industrial and domestic. These water wells probably produce from the Duchesne River Formation which is a highly used aquifer in this area. This well is being drilled with the intention of permitting it as a water disposal well. The production string of casing will also be cemented to surface. The proposed drilling, casing and cement program should adequately protect usable ground water in this area.

Brad Hill — **APD Evaluator**

5/16/2011 — **Date / Time**

Surface Statement of Basis

The proposed IWMSWD 3-30B4 salt water injection well is on Blue Bench approximately 7.7 miles north of Duchesne, Duchesne County, Utah. Paved County roads lead to the site except for approximately 0.1 mile of private road which will be upgraded. Blue Bench, which begins about 1 mile north of Duchesne, is an expansive bench bordered by the breaks into the Strawberry River on the west and the Duchesne River to the east. Except for a few rolling to moderately steep hills, the topography is quite flat with a gentle slope to the south. On the edges of the bench, steep draws or side hills form leading to the drainages below. Some dwellings and limited commercial sites are scattered on the bench with most concentrated along Utah Highway 87 which runs from Duchesne to Altamont. No streams, springs or seeps are known to exist in the general area. It is expected that water for developed sites is obtained from individual water wells.

The selected location is within the interior of a facility managed to separate and evaporate oil field produced water. The pad begins at the south toe of the secondary containment catchment for a water evaporation pond. It extends south to near the existing access road for the facility. To the west a short distance is a series of large separation and storage tanks. Cut along the north side of the pad is 4.9 feet. To the south where the access road will enter, a 4.6 feet fill is shown. In this corner, the location may be gradually sloped to reduce the ramping that will be necessary to access the pad. A large pile of soil currently is located adjacent to the Reserve Pit area. Excavation from the pit will be added to this pile extending it to the north. Some hardening of the site under the rig structure may be needed because of the nature of the sandy soils. The well has been located in this site to facilitate its use with the associated tanks and evaporation ponds which are operated by the same company.

Floyd Bartlett — **Onsite Evaluator**

5/16/2011 — **Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition

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Application for Permit to Drill
Statement of Basis

Pits	A synthetic liner with a minimum thickness of 12 mils with a felt subliner if needed shall be properly installed and maintained in the reserve pit.

RECEIVED: Jun. 07, 2011

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/4/2011 **API NO. ASSIGNED:** 43013507530000
WELL NAME: IWM SWD 3-30 B4
OPERATOR: INTEGRATED WATER MANAGEMENT LLC (N3685) **PHONE NUMBER:** 435 722-3555
CONTACT: Robert Ballou

PROPOSED LOCATION: SESE 30 020S 040W **Permit Tech Review:** ☑
SURFACE: 0300 FSL 0800 FEL **Engineering Review:** ☑
BOTTOM: 0300 FSL 0800 FEL **Geology Review:** ☑
COUNTY: DUCHESNE
LATITUDE: 40.27220 **LONGITUDE:** -110.37192
UTM SURF EASTINGS: 553401.00 **NORTHINGS:** 4457948.00
FIELD NAME: ALTAMONT
LEASE TYPE: 4 - Fee
LEASE NUMBER: 3691 **PROPOSED PRODUCING FORMATION(S):** GREEN RIVER
SURFACE OWNER: 4 - Fee **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** STATE - RLB0013838
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** Integrated Facility
- ☐ **RDCC Review:**
- ☑ **Fee Surface Agreement**
- ☐ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit:

- ☐ **R649-3-2. General**
- ☑ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: R649-3-3
Effective Date:
Siting:

- ☐ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
1 - Exception Location - bhill
5 - Statement of Basis - bhill
8 - Cement to Surface -- 2 strings - ddoucet

RECEIVED: Jun. 07, 2011

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: IWM SWD 3-30 B4
API Well Number: 43013507530000
Lease Number: 3691
Surface Owner: FEE (PRIVATE)
Approval Date: 6/7/2011

Issued to:
INTEGRATED WATER MANAGEMENT LLC, PO Box 816, Roosevelt, UT 84066

Authority:
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of R649-3-3. The expected producing formation or pool is the GREEN RIVER Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Exception Location:
Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Cement volumes for the 9 5/8" and 7" casing strings shall be determined from actual hole diameters in order to place cement from the pipe setting depths back to the surface as indicated in the submitted drilling plan.

Additional Approvals:
The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
  801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
  801-231-8956 - after office hours

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

APPLICATION FOR INJECTION WELL

Name of Operator: Integrated Water Management	Utah Account Number: N	Well Name and Number: IWM SWD 3-30 B4
Address of Operator: PO Box 430 CITY Altamont STATE UT ZIP 84001	Phone Number: (435) 454-4646	API Number:
Location of Well Footage : 800' FEL, 300' FSL QQ, Section, Township, Range: SESE 30 2S 4W	County : Duchesne State : UTAH	Field or Unit Name Lease Designation and Number

Is this application for expansion of an existing project?		Yes ☐	No ☑
Will the proposed well be used for:	Enhanced Recovery?	Yes ☐	No ☐
	Disposal?	Yes ☑	No ☐
	Storage?	Yes ☐	No ☐
Is this application for a new well to be drilled?		Yes ☑	No ☐
If this application is for an existing well, has a casing test been performed?		Yes ☐	No ☐
Date of test: _____			

Proposed injection interval: from 4,000 to 5,500

UIC 378.1

Proposed maximum injection: rate 5,000 bpd pressure 800 psig

Proposed injection zone contains oil ☑, gas ☐, and / or fresh water ☐ within ½ mile of the well.

List of attachments: Attached are write up with exhibits

ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Robert Ballou Title PG- Consultant

Signature Robert Ballou Date 4/7/2011

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APR 11 2011
DIV. OF OIL, GAS & MINING

(5/2002)

REQUIREMENTS FOR CLASS II INJECTION WELLS INCLUDING WATER DISPOSAL, STORAGE AND ENHANCED RECOVERY WELLS SECTION V - RULE R615-5-2

1. Injection well shall be completed, equipped, operated, and maintained in a manner that will prevent pollution and damage to any USDW, or other resources and will confine injected fluids to the interval approved.

Integrated Water Management, a Utah Corporation is the operator of an existing SWD facility located 8 miles north and 1 mile east of Duchesne, Utah. IWM is bonded by the DOGM to conduct operations in its existing evaporation pits associated with its SWD operations. This application is submitted as support for IWM to drill and operate a commercial SWD well to be used in conjunction with current operations. Applicant proposes to dispose of such produced water by injection underground into the lower portion of the Duchesne River-Uintah formations underlying the proposed disposal well.

Applicant proposes to drill a SWD well to be designated the **IWM SWD 3-30 B4** and located 300 feet from the south line and 800 feet from the east line of section 30 2S, 4W, Duchesne, County, Utah. Location of the proposed drill site and other wells drilled within a 1/2 mile of the proposed location and surface owners are noted on exhibits A and B.

2. The application for an injection well shall Include a properly completed Form DOGM-UIC-1 and the following:

2.1 A plat showing the location of the injection well, all abandoned or active wells within a one-half mile radius of the proposed wells, and the surface owner and the operator of any lands or producing leases, respectively, within a one-half mile radius of the proposed injection well.

See Attachments **A** and **B.**

2.2 Copies of electrical or radioactive logs, including gamma ray logs, for the proposed well run prior to the installation of casing and indicating resistivity, spontaneous potential, caliper and porosity.

Triple combination (Electric log, Density/Neutron) logs will be run and will be provided to the DOGM.

2.3 A copy of a cement bond or comparable log run for the proposed injection well after casing was set and cemented.

A cement bond log (CBL) will be run and provided to the DOGM.

2.4 Copies of logs already on file with the Division should be referenced, but need not be re-filed.

All copies of logs in area of review are on file with the Utah Division of Oil, Gas and Mining.

2.5 A description of the casing or proposed casing program of the injection well and of the proposed method for testing the casing before use of the well.

The proposed casing program is 9-5/8", 40#, J-55 surface casing run to 500' GL, (cemented to surface), and 7" 23-29 # J-55 casing run from surface to approximately 5000-5500' (cemented to surface).

2.6 A statement as to the type of fluid to be used for injection, its source and estimated amounts to be Injected daily.

The primary type and source of fluid to be used for injection will be production water that has been cleaned and gravity fed to IWM's disposal pit #3. The estimated average rate of injection will be 2000 BPD, and the estimated maximum rate of injection will be 5000 BPD.

2.7 Standard laboratory analysis of the fluid to be injected, the fluid in the formation into which the fluid is being injected, and the compatibility of the fluids.

Production water analysis will vary depending on the company and associated location that the production is coming from. Included are representative analysis of produced water from 3 IWM costumer wells . See **Exhibit C-A,C-B, C-C**. Included as **ExhibitC1** are water analysis reports from two SWD wells in the immediate vicinity, (both drilled as SWD wells and not as recompletions from a producing oil and gas well, to a SWD well). These wells are;

To the east of the proposed IWM SWD 3-30 B4, **The Russell SWDW 2-32B4**.

To the west of the proposed IWM SWD 3-30 B4, the **LDS Church 2-27 B5).**

These water analysis reports are from actual swab tests of specific intervals and show that formation water from produced water and in the proposed injection interval, the Duchesne River-Uintah formations, are unfit for domestic livestock, irrigation or other general uses.

It is proposed that in the IWM SWD 3-30 B2, IWM will take two samples of formation water by production swab tests, one from the subsurface interval from 4000 to4875 feet and the other test will we taken below 4875 feet over an interval to be selected. We will notify the DOGM prior to taking such samples and conducting such tests in order that the DOGM may witness the tests and take independent samples if desired.

The proposed average and maximum injection pressures.

Judging from the data collected from the similar wells in the immediate area The proposed average injection pressure will be approximately 400 psig and the maximum injection pressure will not exceed 800 psig.

2.8 Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining Interval that could enable the injected fluid or formation fluid to enter the fresh water strata.

The minimum fracture gradient for the IWM SWD 3-30 B4 calculates at 0.733 psig/ft. However a gradient step rate test will be run on the well to determine the maximum injection pressure. Historically this has not been an issue in the SWD wells located within a township of the IWM SWD 3-30 B4 as they all have operated at pressures of less than 800#, some much less.

Additionally, the injection system will be equipped with high and low pressure shut down devices that will automatically shut in injection waters if a system blockage or leakage occurs. One way check valves will also ensure proper flow management. Relief valves will also be utilized for high-pressure relief

2.9 Appropriate geological data on the injection interval and confining beds,
Including the geologic name, lithologic description, thickness, depth, and
lateral extent

In the Russell SWDW 2-32B4 the gross injection zones are 2464'-3726', (2464-2470', 2548'-2558', 2630'-2638', 2884'-2890', 3054-3062', 3720'-3726', two holes per foot). Records from 1/86 to 9/10 show that this well disposed of 6,836,018 BW with a maximum tubing pressure of 830 # and an average tubing pressure of about 600#. Note: this figure does not include the unreported water that was put away from 1975-1986.

In the LDS 2-27 B5 the gross injection zones are 2088-2860, (2088'-2098', 2129'-2136', 2312'-2317', 2370'-2374', 2377'-2383', 2407'-2413', 2416'-2419', 2515'-2522', 2559'-2561', 2817'-2819', 2840'-2860' one hole per foot); Records from 1/86 to 9/10 show that this well disposed of 33,654,635 BW with a maximum tubing pressure of 550 # . Note: this figure does not include the unreported water that was put away from 1975-1986. All perforations in the Duchesne River-Uintah formations.

Note: The original scope of the project was to pattern the IWM SWD 3-30 B4 after the 2-32B4 and the 2-27 B5. However, after meeting with the DOGM it was agreed that due to possible environmental concerns a deeper injection interval horizon patterned after wells that injected into deeper horizons would satisfy DOGM concerns. The closest offset being the Rhodes 1-36 B5 a converted SWD well. Other close by wells that appear

to be similar to the proposed IWM SWD 3-30 B4 are the Tew 1-9 B5 a converted SWD well with a perferation interval of 3700-5800' and 5900-6400'. Also the Erich 2-11 B5 that has injected into 4 injection intervals: 3749-3985', 4027-4496,4576-5573',5607-5810'.

In the Rhodes 1-36 B5 the gross injection zone intervals are: 4114' to 5055' the original plan was to perforate from 5070'-4583' (phase I) and if needed phase II would be from 4452'-4052' with the injection packer set 4520' for phase I. Records show that phase I and phase II were perf'd and injected into. All perforations in the lower Uinta Fm. Since the well was put into service in January of 1999 it has taken 13,813,822 bbls (to 9/10) for an average per day total of 4168 BW/d.

The reservoir is composed primarily of clastic fluviatile, lacustrine, and transitional sediments and is composed of sandstones, siltstones and shales. Carbonates are also encountered increasing with depth with numerous sandstones containing waters of varying degrees of salinity, porosity and permeability.

The completion reports and logs of these three wells are included in exhibit D, D1,D2.

2.10 A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no conduit exists that could enable fluids to migrate up or down the wellbore and enter the Improper intervals.

Well bore diagrams of the Katherine 3-29 B4 and Christman Blann 1-31 B4 are included as **Exhibit E**. Both wells are producing wells with no reported casing issues.

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2.11 An affidavit certifying that a copy of the application has been provided to all operators or owners, and surface owners within a one-half mile radius of the proposed injection well.

See **Exhibit F**.

2.12 Any other Information that the Board or Division may determine is necessary to adequately review the application.

The proposed injection zone is in the - Uintah Formation, upper Tgr fm. The IWM SWD 3-30 B4 well was patterned after the 1-36 B5 in closest in proximity to the IWM SWD 3-30 B2. The proposed injection zone will be determined by the porous intervals encountered in the drilling of the well but if

consistent with other nearby SWD wells (1-36 B5 as noted but also the Tew 1-9 B5, and the Erich 2-11 B5), the zones are expected to be from 4000' to 5500'. The confining stratum directly above the injection zone is the Duchesne River formation and below the injection zones is the Green River Formation.

Integrated Water Management will supply any additional information requested by the Utah Division of Oil, Gas and Mining.

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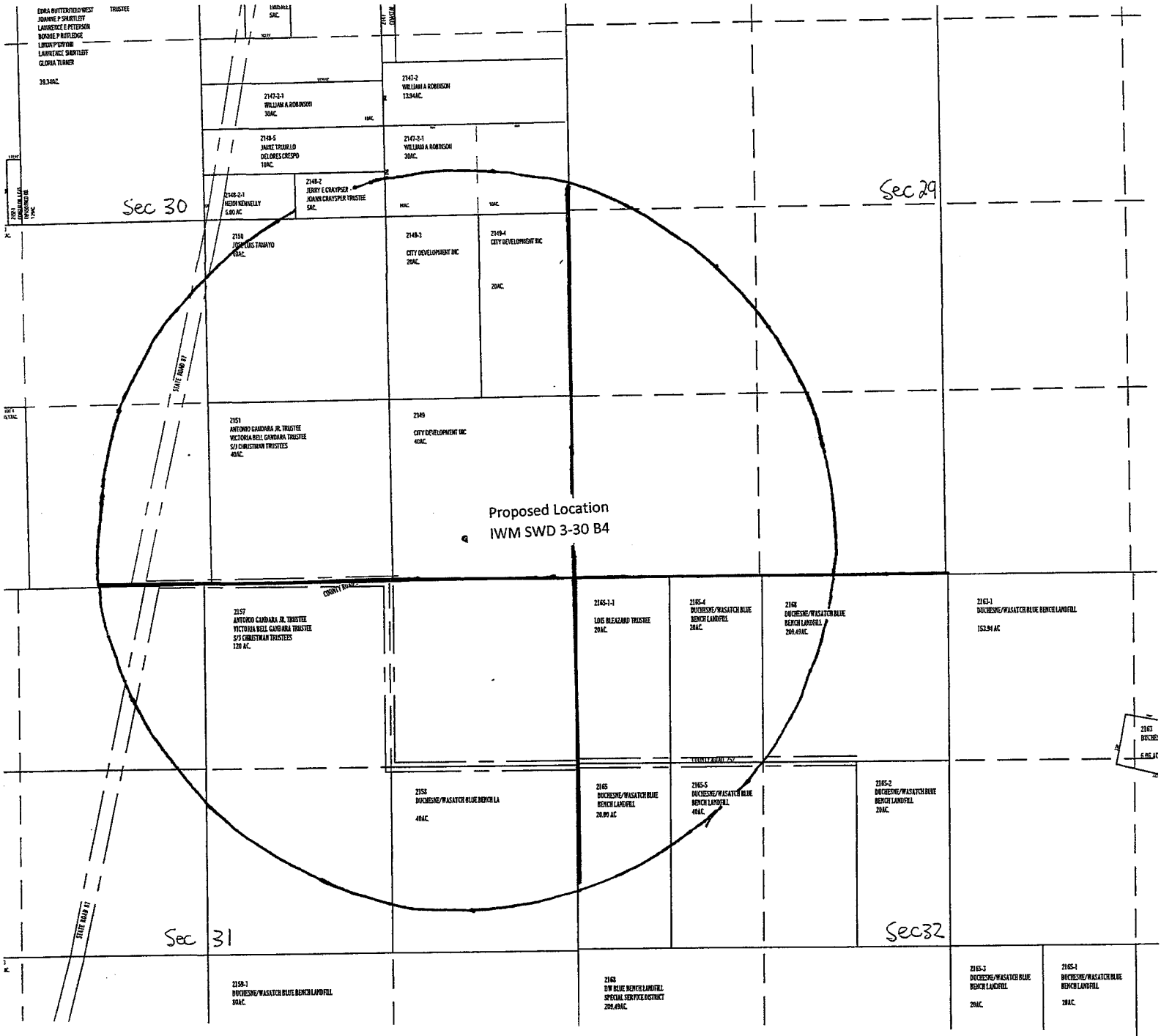

Integrated Water Management
IWM SWD 3-30 B4
Section 30 2S, 4W
Surface Owners within 1/2 mile radius
Exhibit A

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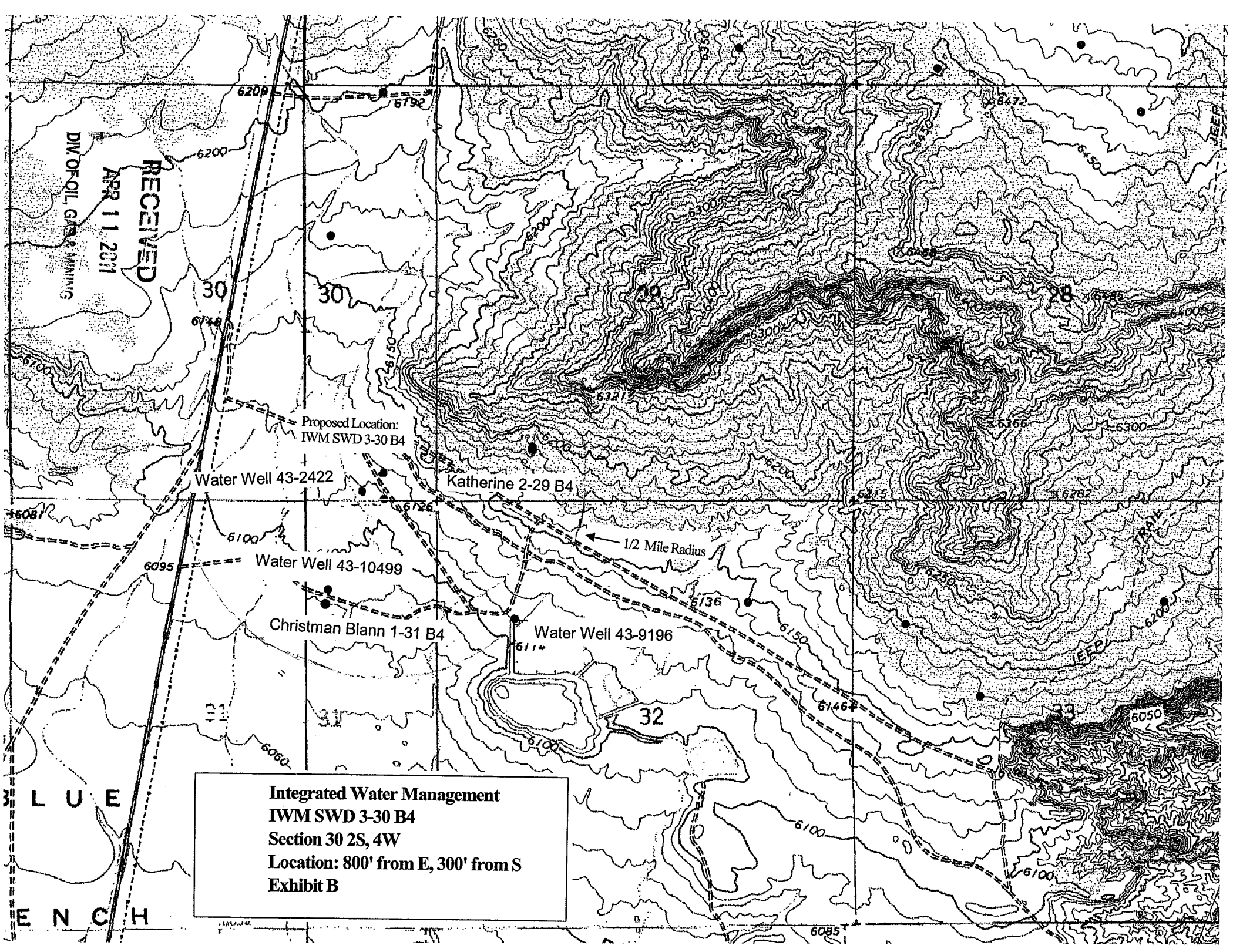
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Proposed Location:
IWM SWD 3-30 B4
Water Well 43-2422
Katherine 2-29 B4
1/2 Mile Radius
Water Well 43-10499
Christman Blann 1-31 B4
Water Well 43-9196
Integrated Water Management
IWM SWD 3-30 B4
Section 30 2S, 4W
Location: 800' from E, 300' from S
Exhibit B

NALCO
1465 East 1650 south Vernal UT 84078 (435) 789-2069 www.nalco.com

Water Analysis Report

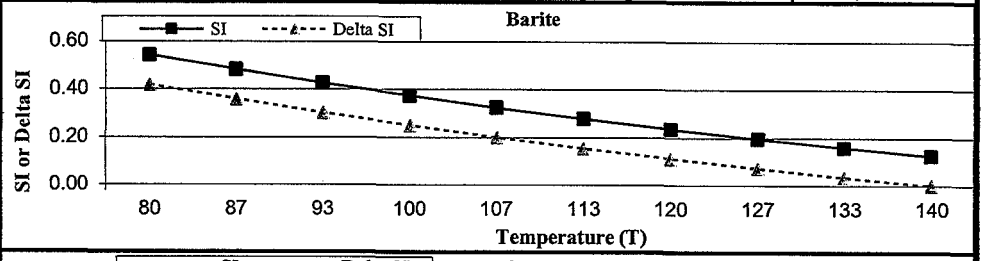
Field :	**Newfield**	**Sample Date :**	**4/18/2010**
County :		**Formation :**	
Location :	FENCELINE 2-23-8-16	**Rock Type :**	
Lab ID :		**Depth :**	**Analysed Date: 1/5/2011**
Comments :			

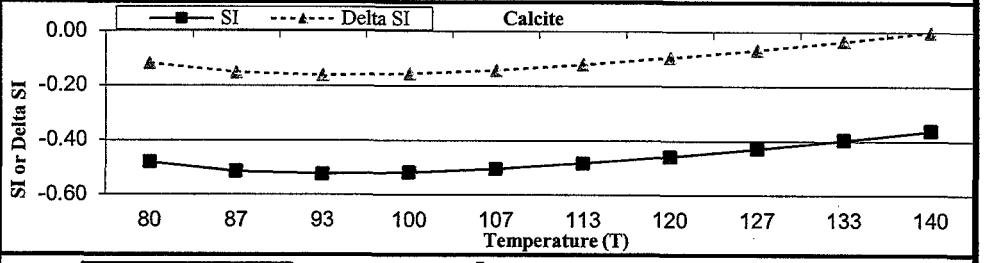
CATIONS	mg/l
Potassium	42.8
Sodium	6,776.3
Calcium	8.2
Magnesium	2.3
Iron	1.2
Barium	13.0
Strontium	0.0
SUM +	**6,843.8**

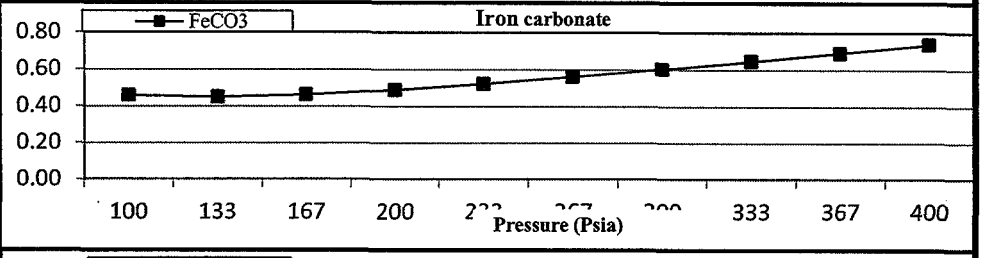
	Measured	Calculated
Total Dissolve Solid	17205.00	0.00
Total Hardness		29.93
PH	8.27	0.00
Total H2S aq	0.00	0.00
Manganese	1.38	
PO4 Residual	0.00	
SRB Vials Turned	-	
APB Vials Turned	-	

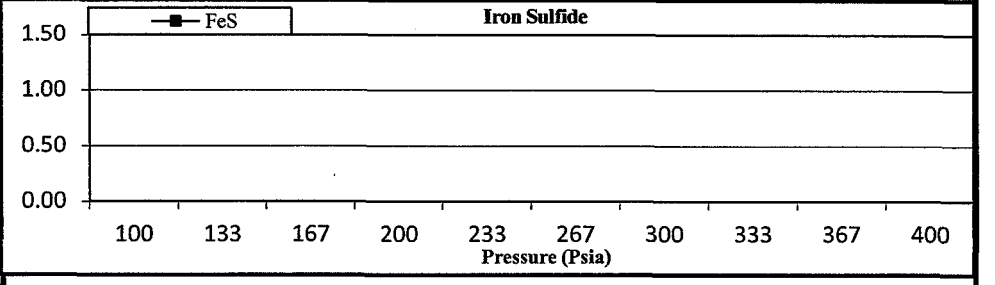
ANIONS	mg/l
Sulfate	10.0
Chloride	10,000.0
Carbonate	0.0
Bicarbonate	878.4
Bromide	0.0
Organic Acids	0.0
Hydroxide	0.0
SUM -	**10,888.4**

Initial(BH)	Final(WH)
Saturation Index values	
Calcite ($CaCO_3$)	
-0.36	-0.48
Barite ($BaSO_4$)	
0.12	0.54
Halite (NaCl)	
-3.01	-2.96
Gypsum	
-4.34	-4.35
Hemihydrate	
-4.90	-5.11
Anhydrite	
-4.32	-4.59
Celestite	
0.00	0.00
Iron Sulfide	
0.00	0.00
Zinc Sulfide	
0.00	0.00
Calcium fluoride	
0.00	0.00
Iron Carbonate	
0.74	0.46
Inhibitor needed (mg/L)	
Calcite	**NTMP**
0.00	0.00
Barite	**BHPMP**
0.00	0.00









Lab Manager: Andrea Craig
Analysis by:

Exhibit C-A

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NALCO
1465 East 1650 south Vernal UT 84078 (435) 789-2069 www.nalco.com

Water Analysis Report

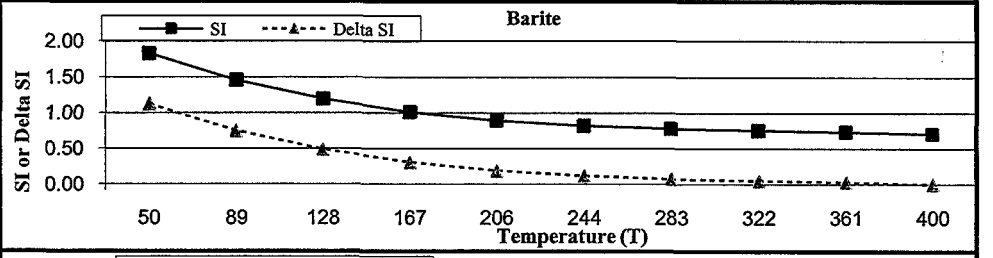
Field :	**Barrett**	**Sample Date :**	**8/16/2010**
County :		**Formation :**	
Location :	Prickly Pear Fed #12-24-12-14	**Rock Type :**	
Lab ID :		**Depth :**	**Analysed Date: 2/16/2011**
Comments :			

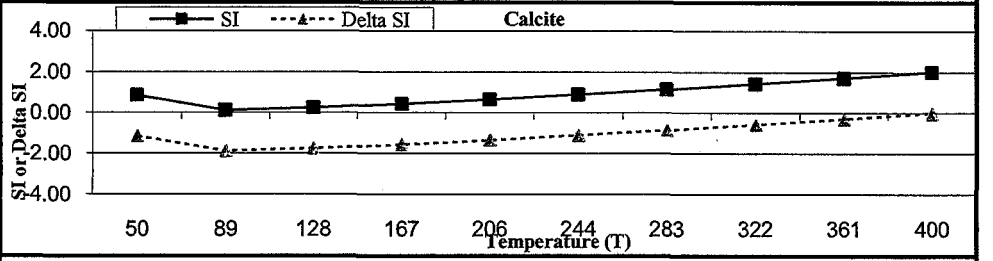
CATIONS	mg/l
Potassium	356.5
Sodium	15,909.1
Calcium	1,913.0
Magnesium	352.2
Iron	83.4
Barium	4.0
Strontium	0.0
SUM +	**18,618.2**

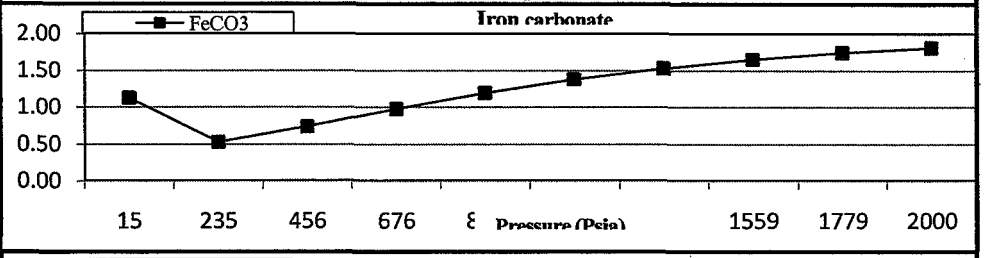
	Measured	Calculated
Total Dissolve Solid	48046.00	0.00
Total Hardness		6226.52
PH	6.79	0.00
Total H2S aq	0.00	0.00
Manganese	0.12	
PO4 Residual	0.00	
SRB Vials Turned	0.00	
APB Vials Turned	0.00	

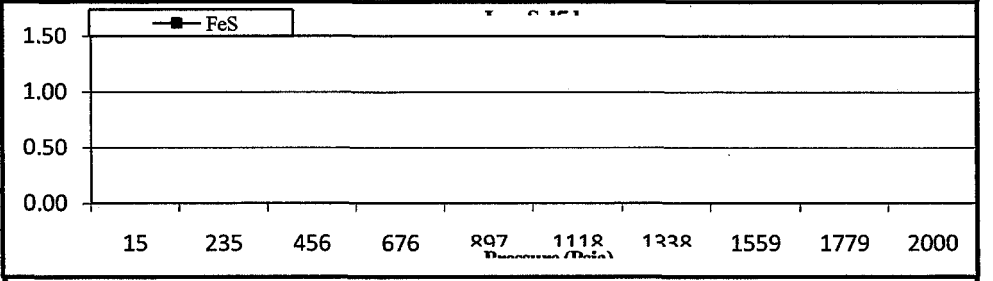
ANIONS	mg/l
Sulfate	1,040.0
Chloride	27,900.0
Carbonate	0.0
Bicarbonate	1,220.0
Bromide	0.0
Organic Acids	0.0
Hydroxide	0.0
SUM -	**30,160.0**

Initial(BH)	Final(WH)
Saturation Index values	
Calcite (CaCO3)	
2.01	0.86
Barite (BaSO4)	
0.70	1.82
Halite (NaCl)	
-2.08	-2.15
Gypsum	
-0.20	-0.42
Hemihydrate	
0.85	-1.21
Anhydrite	
1.28	-0.75
Celestite	
0.00	0.00
Iron Sulfide	
0.00	0.00
Zinc Sulfide	
0.00	0.00
Calcium fluoride	
0.00	0.00
Iron Carbonate	
1.81	1.12
Inhibitor needed (mg/L)	
Calcite	**NTMP**
105.51	0.00
Barite	**BHPMP**
8.91	*0.65*









Lab Manager: Andrea Craig
Analysis by:

Exhibit C-B

Production Water Report and Scaling Tendencies

Creg Wilkins 12/17/2003 Version : 947

Analysis by :	Creg Wilkins
Field :	
County :	Uintah
Lab ID# :	El Paso Production
Sample Date :	13-Apr-09
Location :	2-9B4
Formation :	
Depth :	
Rock Type:	
Porosity:	
Permeability:	

INPUT Sample Temp °F :	60.0
INPUT Downhole Temp °F :	125.0
INPUT Sample Press :	6.0
INPUT sample pH, su	10.00
Input mole % CO_2	0.04
pH resulting from CO_2	10.02
Calc Carbon Dioxide (Aq), mg/L	0.2
Carbon Dioxide, CO_2 mg/L	0.0
Total Sulfide, mg/L	6.0
Dissolved Oxygen, ppm	
Dissolved Oxygen, ppb	0.0

INPUT TDS @180 °C, mg/L	54,491
Calc TDS (less CO2), mg/L	54,491
INPUT Resistivity @ 68°F	0.150
Calculated Resistivity @ 68°F	0.150
Input Conductivity, µmhos/cm	66,667
Calc Cond@25 °C, µmhos/cm	66,667
INPUT Density @ STP, g/mL	1.039
Calc Density @STP, g/mL	1.039
MicroBiological - # of bottles turned	
SRBs :	(1)
Aerobic Bacteria :	(1)

K^+	172.0
Na^+	20,990.9
Na^+ by Diff	+ 0.00
Ca^{++}	60.0
Mg^{++}	378.2
Fe^{++}	3.8
Ba^{++}	125.0
Sr^{++}	0.0
Br^-	0.0
$SO_4^=$	1,600.0
Cl^-	30,000.0
$CO_3^=$	1,560.0
HCO_3^-	1,342.0
OH^-	0.0
Organic Acid	0.0

Note: Organic Acids as Acetate

Titrations - if values are placed in mls or digits - results will transfer to Water Report

Parameter	mls	Digits	Sample Size	Normality	Results
CO_2	0	0.0	100	3.636	
H_2S	0	0.0	10	0.3998	
T reading	0	0.0	100	8.0	
P reading	0	0.0	100	1.6	
Ca^{++}	0	0.0	50	0.8	
THardness	0	0.0	50	0.8	
Cl^-	0	0.0	1	2.256	

Comments: Mn .45

Exhibit C-c

B.

PARTIAL

75 086

PLEASE NOTE: Sample cannot be analysed until all blanks are filled in (Slip must accompany sample)

STATE OF UTAH
DEPARTMENT OF SOCIAL SERVICES
DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113

DO NOT WRITE HE JAN. 16 19
Sample Received on
Analysis Authorization

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WATER SAMPLE FOR CHEMICAL ANALYSIS ☒
WATER SAMPLE FOR RADIOLOGIC ANALYSIS ☐

SAMPLE COLLECTED FROM: (check one)

Stream ☐ Spring ☐ Well ☒
City or Town water distribution system ☐
Other ☐ (describe) WASTE WATER INJECTION WELL

EXACT DESCRIPTION OF SAMPLING POINT: (see note on reverse side) WELL No. 2-27B5 SEC 27, T2S, R5W (USM) DUCHESNE CO.

~~STATE ENGINEER'S APPLICATION OR CLAIM NO.~~ FROM PERFORATIONS AT 2088 TO 2383 LEVEL

SUPPLY OWNED BY:

PRESENT USE OF SUPPLY:

PROPOSED USE OF SUPPLY:

SAMPLE COLLECTED BY: CLEON FEIGHT, OIL & GAS DIV. DATE:

REPORT RESULTS TO: R. WINSHAW RNL PHONE:

Address: BLDG 72.

DO NOT WRITE BELOW DOUBLE LINE

RESULTS OF ANALYSIS

Turbidity		J.T.U.	Iron (total) as Fe		mg/l
Conductivity	[illegible]	micromhos/cm	Iron in filtered sample as Fe		mg/l
pH	7.0		Lead as Pb		mg/l
Total Dissolved Solids	19560	17,560	Magnesium as Mg		mg/l
Alkalinity(total)as $CaCO_3$	4428	mg/l	Manganese as Mn		mg/l
Aluminum as Al		mg/l	Mercury as Hg		mg/l
Arsenic as As		mg/l	Nitrate as N		mg/l
Barium as Ba		mg/l	Nitrite as N		mg/l
Bicarbonate as HCO_3	[illegible]	mg/l	Phosphate as PO_4		mg/l
Boron as B		mg/l	Phenols as Phenol		mg/l
Cadmium as Cd		mg/l	Potassium as K		mg/l
Calcium as Ca		mg/l	Selenium as Se		mg/l
Carbonate as CO_3		mg/l	Silica as SiO_2		mg/l
Chloride as Cl	8000	mg/l	Silver as Ag		mg/l
Chromium(hexavalent)as Cr		mg/l	Sodium as Na	7000	mg/l
Copper as Cu		mg/l	Sulfate as SO_4	500	mg/l
Cyanide as CN		mg/l	Surfactant as MBAS		mg/l
Fluoride as F		mg/l	Zinc as Zn		mg/l
Hardness(total) as $CaCO_3$	18	mg/l	Total Alpha		pci/l
Hydroxide as OH		mg/l	Total beta		pci/l
Ammonia N as NH_3					i/l
					mg/l

SDH-San-49-Rev. 4/73

Exhibit C1

LITE RESEARCH LABORATORIES

P.O. Box 119 Fort Duchesne, Utah 84026 (801) 722-2254

LABORATORY NUMBER W-2129
SAMPLE TAKEN
SAMPLE RECEIVED 4-18-75
RESULTS REPORTED 4-18-75

SAMPLE DESCRIPTION FIELD NO.
COMPANY Husky Oil Co. LEASE Russell WELL NO. 2-32B4
FIELD Altamont COUNTY Duchesne STATE Utah
SAMPLE TAKEN FROM
PRODUCING FORMATION Duchesne River-Uinta TOP 2548-2558, 3726'
REMARKS

SAMPLE TAKEN BY Warren Johnston

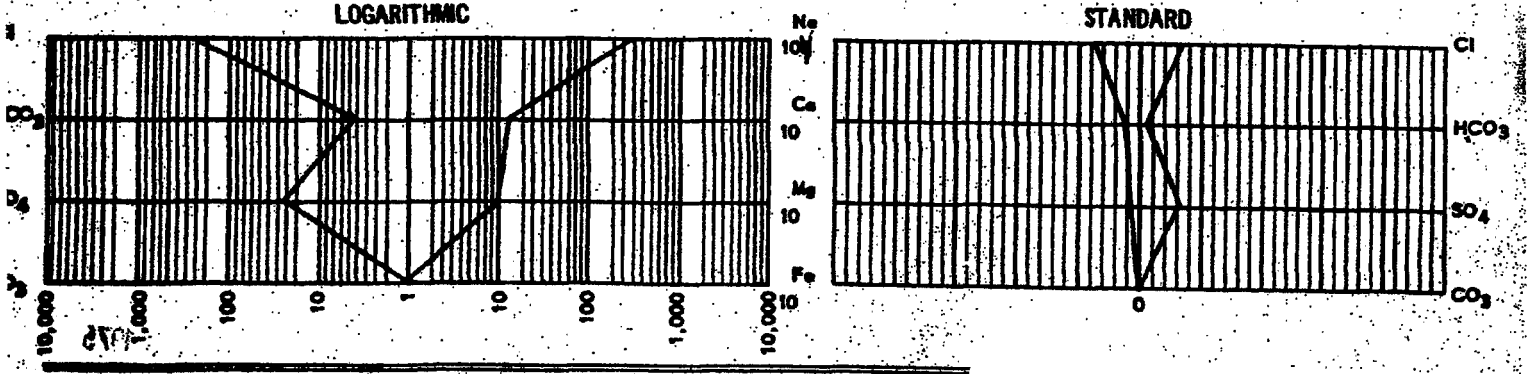
CHEMICAL AND PHYSICAL PROPERTIES

SPECIFIC GRAVITY @60/60° F. 1.0146 pH 8.28 RES. 0.30 OHM METERS @ 77°F

TOTAL HARDNESS 1155.47 mg/L as $CaCO_3$ TOTAL ALKALINITY 360.0 mg/L as $CaCO_3$

CONSTITUENT	MILLIGRAMS PER LITER mg/L	MILLEQUIVALENTS PER LITER MEQ/L		REMARKS
CALCIUM - Ca^{++}	273.0	13.65		
MAGNESIUM - Mg^{++}	114.0	9.34		
SODIUM - Na^{+}	8450.0	367.39		
BARIUM (INCL. STRONTIUM) - Ba^{++}	10.6	0.15		
TOTAL IRON - Fe^{++} AND Fe^{+++}	2.55	0.09	390.62	
BICARBONATE - HCO_3^{-}	360.0	5.90		
CARBONATE - CO_3^{--}	0	0		
SULFATE - SO_4^{--}	1500.0	31.25		
CHLORIDE - Cl^{-}	11695.3	329.45	366.69	
TOTAL DISSOLVED SOLIDS	20120.			

MILLEQUIVALENTS PER LITER



ANALYST
CHECKED

Exhibit C1

LITE RESEARCH LABORATORIES

P.O. Box 119 Fort Duchesne, Utah 84026 (801) 722-2254

LABORATORY NUMBER W-2123
SAMPLE TAKEN 4-17-75
SAMPLE RECEIVED 4-17-75
RESULTS REPORTED 4-17-75

SAMPLE DESCRIPTION

COMPANY Husky Oil LEASE Russell FIELD NO. WELL NO. 2-32B4
FIELD Altamont COUNTY Duchesne STATE Utah
SAMPLE TAKEN FROM
PRODUCING FORMATION Duchesne River-Uinta TOP 2464'-2470'
REMARKS

SAMPLE TAKEN BY

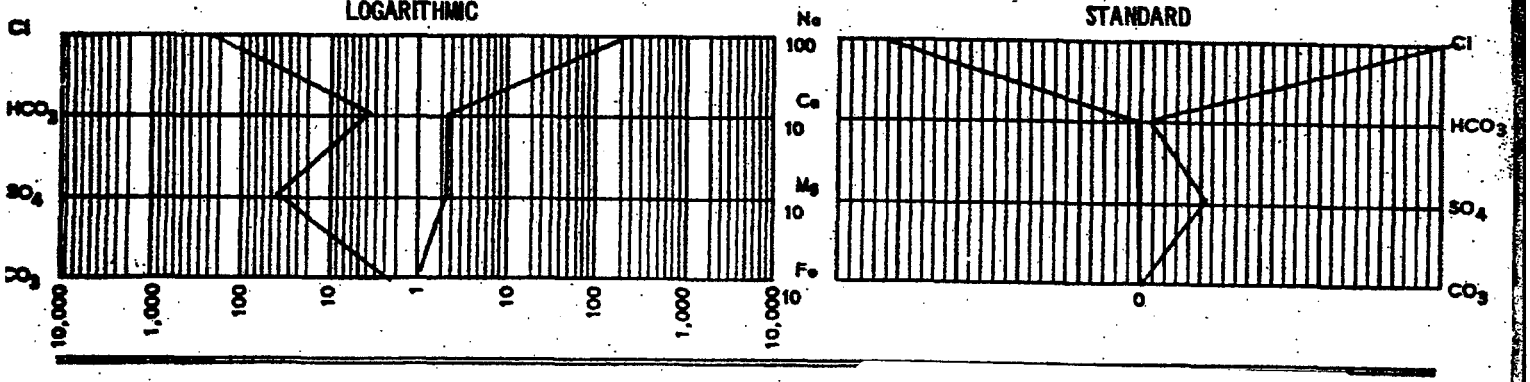
CHEMICAL AND PHYSICAL PROPERTIES

SPECIFIC GRAVITY @60/60° F. 1.0138 pH 8.91 RES. 0.50 OHM METERS @ 77°F

TOTAL HARDNESS 254.35 mg/L as $CaCO_3$ TOTAL ALKALINITY 352.0 mg/L as $CaCO_3$

CONSTITUENT	MILLIGRAMS PER LITER mg/L	MILLEQUIVALENTS PER LITER MEQ/L		REMARKS
CALCIUM - Ca ++	51.15	2.56		
MAGNESIUM - Mg ++	30.30	2.48		
SODIUM - Na +	4890.0	212.61		
BARIUM (INCL. STRONTIUM) - Ba ++	2.9	0.04		
TOTAL IRON - Fe++ AND Fe +++	1.07	0.04	217.73	
BICARBONATE - HCO_3^-	260.0	4.26		
CARBONATE - CO_3^{--}	92.0	3.07		
SULFATE - SO_4^{--}	2600.0	54.17		
CHLORIDE - CL^-	9596.2	270.32	331.82	
TOTAL DISSOLVED SOLIDS	17440.			

MILLEQUIVALENTS PER LITER



Al
Cl

Exhibit C1

(A)

PARTIAL

75 085

PLEASE NOTE: Sample cannot be analysed until all blanks are filled in (Slip must accompany sample)

STATE OF UTAH
DEPARTMENT OF SOCIAL SERVICES
DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113

DO NOT WRITE HERE
Sample Received on
Analysis Authorization

WATER SAMPLE FOR CHEMICAL ANALYSIS ☒
WATER SAMPLE FOR RADIOLOGIC ANALYSIS ☐

SAMPLE COLLECTED FROM: (check one)

Stream ☐ Spring ☐ Well ☒
City or Town water distribution system ☐
Other ☐ (describe) WASTE WATER INJECTION WELL

EXACT DESCRIPTION OF SAMPLING POINT: (see note on reverse side) WELL NO. 2-2785 Sec 27, T2S, R5W (USM) DUCHESNE Co.

~~STATE ENGINEER'S APPLICATION OR CLAIM NO.~~ FROM PERFORATIONS AT 2817 TO 2860 LEVEL.

SUPPLY OWNED BY:

PRESENT USE OF SUPPLY:

PROPOSED USE OF SUPPLY:

RECEIVED
APR 11 2001
DIV. OF OIL, GAS & MINING

SAMPLE COLLECTED BY: CLEON FEIGHT, OIL & GAS DIV. DATE:

REPORT RESULTS TO: R. HINSHAW PHONE:

Address: BLDG 72.

DO NOT WRITE BELOW DOUBLE LINE

RESULTS OF ANALYSIS

Turbidity		J.T.U.	Iron (total) as Fe		mg/l
Conductivity		micromhos/cm	Iron in filtered sample as Fe		mg/l
pH	7.70		Lead as Pb		mg/l
Total Dissolved Solids	15240	18,340	Magnesium as Mg		mg/l
Alkalinity(total)as $CaCO_3$	11790	mg/l	Manganese as Mn		mg/l
Aluminum as Al		mg/l	Mercury as Hg		mg/l
Arsenic as As		mg/l	Nitrate as N		mg/l
Barium as Ba		mg/l	Nitrite as N		mg/l
Bicarbonate as HCO_3	3500	mg/l	Phosphate as PO_4		mg/l
Boron as B		mg/l	Phenols as Phenol		mg/l
Cadmium as Cd		mg/l	Potassium as K		mg/l
Calcium as Ca		mg/l	Selenium as Se		mg/l
Carbonate as CO_3		mg/l	Silica as SiO_2		mg/l
Chloride as Cl	3700	mg/l	Silver as Ag		mg/l
Chromium(hexavalent)as Cr		mg/l	Sodium as Na	7005	mg/l
Copper as Cu		mg/l	Sulfate as SO_4	220	mg/l
Cyanide as CN		mg/l	Surfactant as MBAS		mg/l
Fluoride as F		mg/l	Zinc as Zn	0.04	mg/l
Hardness(total) as $CaCO_3$	10	mg/l	Total Alpha		pci/l
Hydroxide as OH		mg/l	Total beta		pci/l
Ammonia N as NH_3					nci/l
					mg/l

SDH-San-49-Rev. 4/73

Exhibit C1

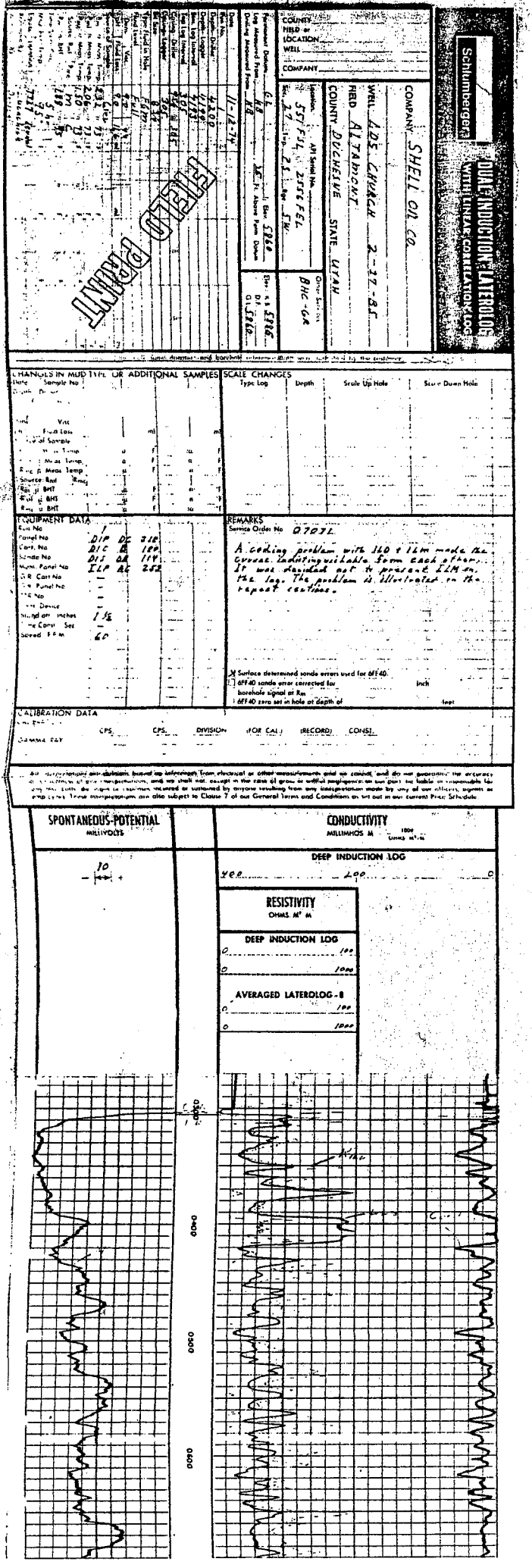
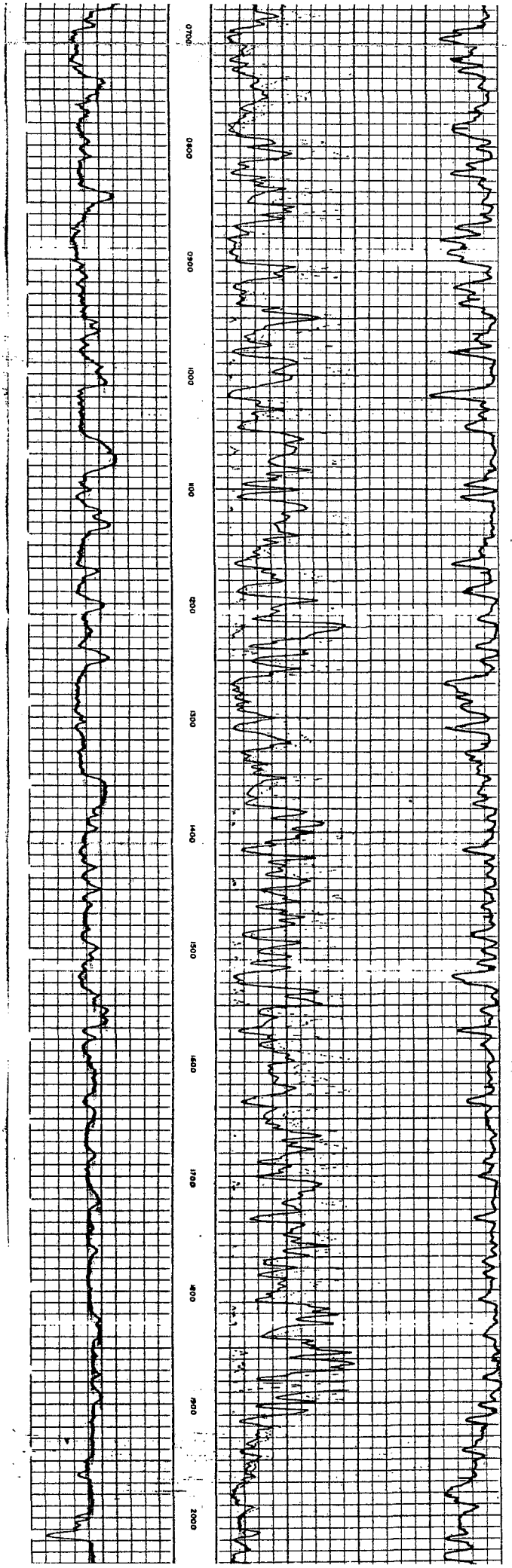
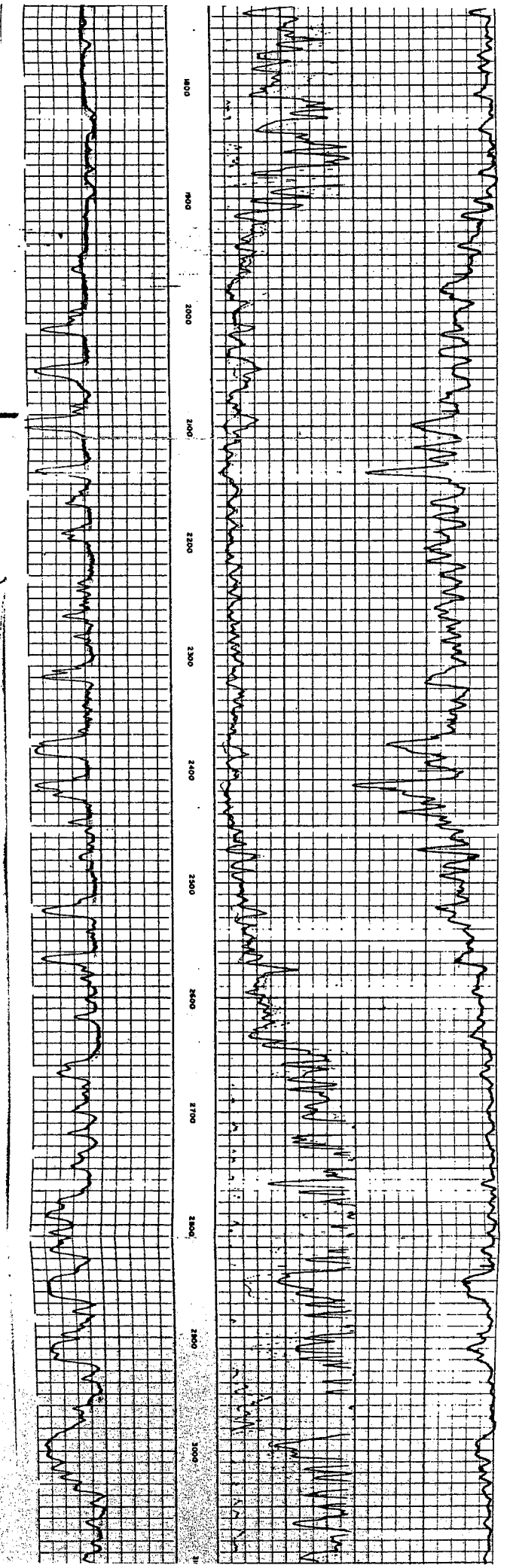
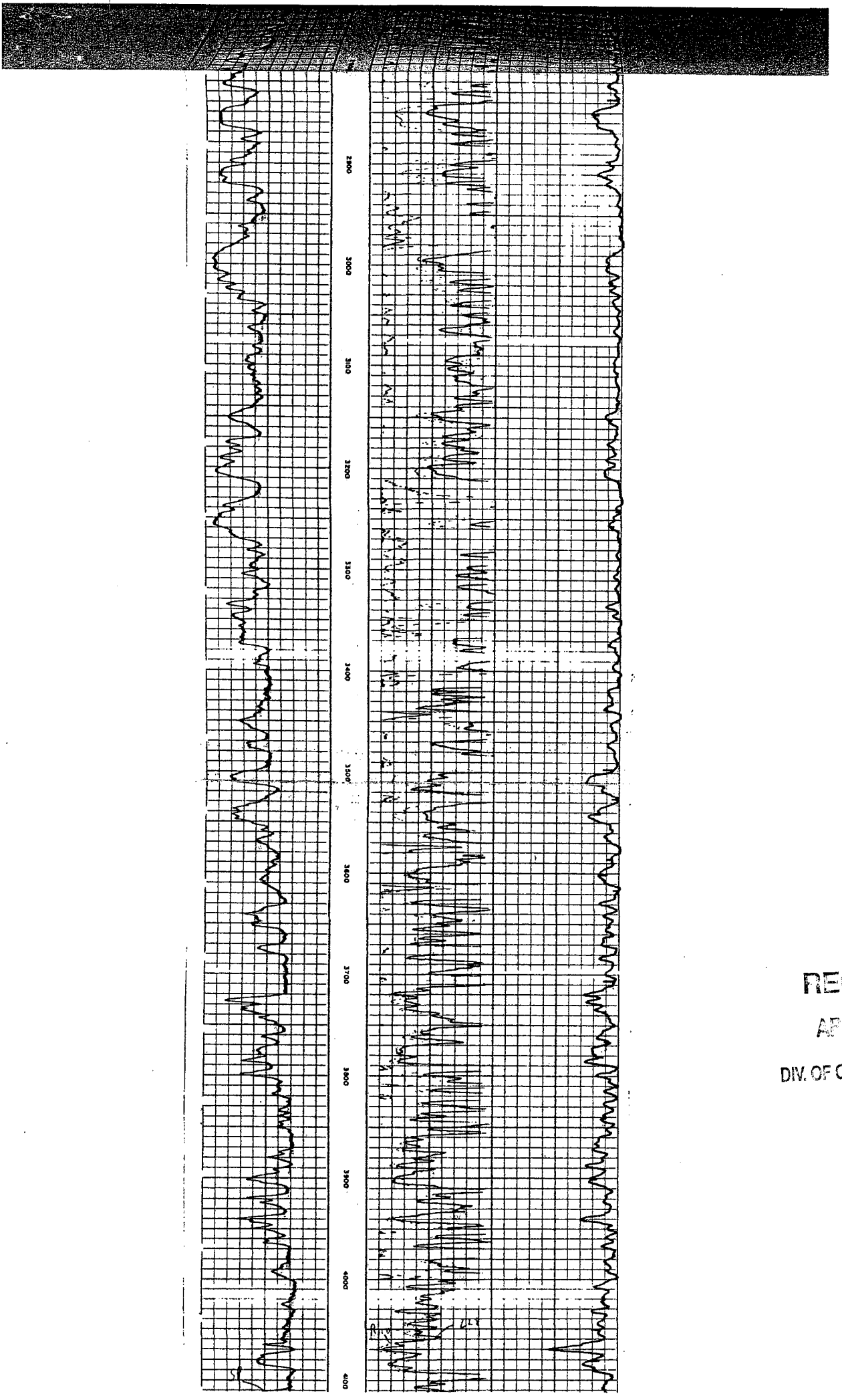


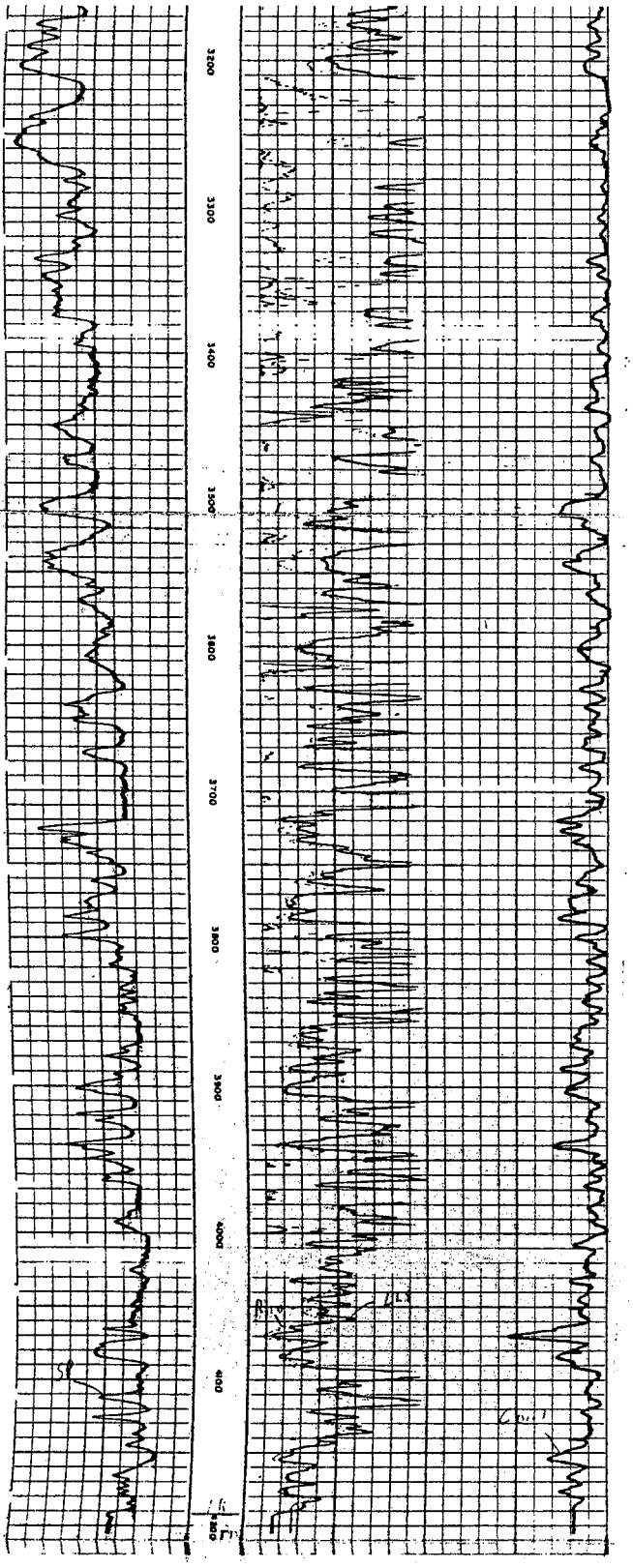
Exhibit D





TOP OF DISPOSAL ZONE 2090'





DETAIL LOG 5" 100'		
SPONTANEOUS-POTENTIAL MILLIVOLTS	DEPTHS	RESISTIVITY OHMS M² M.
		DEEP INDUCTION LOG .2 1.0 10 100 1000 2000
		LATEROLOG—8 .2 1.0 10 100 1000 2000

Form OGCC-3

RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

14 pgs

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other SWD Well

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR
Shell Oil Company

3. ADDRESS OF OPERATOR
1700 Broadway, Denver, Colorado 80202

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 551' FSL and 2556' FEL, Section 27
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.
Patented

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
L.D.S. Church

9. WELL NO.
2-27B5 SWD

10. FIELD AND POOL, OR WILDCAT
Altamont

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
SW/4 SE/4 Section 27-T2S-R5W, USB&M

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-013-30340	9/26/74	Duchesne	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
11/3/74	11/12/74	1/4/75	5887KB, 5860 GL	5862

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
4205	4075 (FC)	-	→	Total	-

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
2088-2860 (gross interval) Duchesne River-Uinta

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
BHCS, PDC, CBL

27. WAS WELL CORED
No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	40#	305'	12-1/4"	300 sx	0
7"	23#, 26#, 29#	4,205'	8-3/4"	1080 cu ft	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	2014'	2000'

31. PERFORATION RECORD (*Interval, size and number*)
2088-2098, 2129-2136, 2312-2317,
2370-2374, 2377-2383, 2407-2413,
2416-2419, 2515-2522, 2559-2561,
2817-2819, 2840-2860
(1 hole/ft w/Jumbo jets, 72 holes total)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
2817-2860	2200 gal 15% HCl
2312-2561	2300 gal 15% HCl
2088-2136	1700 gal 15% HCl

33.* PRODUCTION

DATE FIRST ~~PRODUCTION~~ inj	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
1/4/75	Injecting into SWD well	Injecting

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
1/26/75	24	-		-	-	3390	-

[nj ~~FLOW. TUBING PRESS.~~	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
250	-		-	-	3390	-

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
-

TEST WITNESSED BY
-

35. LIST OF ATTACHMENTS
Well History Report

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED T.S. Mize TITLE ~~Division Operations Engr.~~ DATE 1/29/75

: USGS (for information)

(See Instructions and Spaces for Additional Data on Reverse Side)

Schlumberger

DUAL INDUCTION - LATEROLOG WITH LINEAR CORRELATION LOG

COUNTY
FIELD or LOCATION
WELL
COMPANY

Perfs.

COMPANY Husky Oil Company

WELL Russell 2-32 B4 swpw

FIELD Altamont

COUNTY Duchesne STATE Utah

Location 213 API Serial No.
1919' FNL 1317' FEL 8
Sec. 32 Twp. 2S Rge. 4W

Other Services:
BHC-GR

Permanent Datum: G.L. ; Elev.: 6134
Log Measured From K.B. , 11.8 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 6145.8
D.F.
G.L. 6134

Date	3/28/75			
Run No.	ONE			
Depth—Driller	4000			
Depth—Logger	3995			
Btm. Log Interval	3989			
Top Log Interval	284			
Casing—Driller	9 5/8 @ 285	@	@	@
Casing—Logger	284			
Bit Size	8 1/2			
Type Fluid in Hole	FGM			
Fluid Level	Full			
Dens. / Visc.	NA / 40			
pH / Fluid Loss	NA / NA ml	ml	ml	ml
Source of Sample	Flowline			
R_m @ Meas. Temp.	4.87 @ 61 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	4.78 @ 61 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
Source: R_{mf} / R_{mc}	M / —			
R_m @ BHT	3.51 @ 83 °F	@ °F	@ °F	@ °F
Time Since Circ.	3.0 Hrs.			
Max. Rec. Temp.	83 °F	°F	°F	°F
Equip. / Location	5602 / Gnd Jct			
Recorded By	Geiser			

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

CHANGES IN MUD TYPE OR ADDITIONAL SAMPLES

Date	Sample No.		
Depth - Driller			
Type Fluid in Hole			
Dens. / Visc.			
pH / Fluid Loss		ml	ml
Source of Sample			
R_m @ Meas. Temp.		@ °F	@ °F
R_{mf} @ Meas. Temp.		@ °F	@ °F
R_{mc} @ Meas. Temp.		@ °F	@ °F
Source: R_{mf} / R_{mc}			
R_m @ BHT		@ °F	@ °F
R_{mf} @ BHT		@ °F	@ °F
R_{mc} @ BHT		@ °F	@ °F

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

EQUIPMENT DATA

Run No.	ONE		
Panel No.	DIP-DC-364		
Cart. No.	DIC-IB-300		
Sonde No.	DIS-DB-253		
Mem. Panel No.	ILP-AC-235		
G.R. Cart No.	—		
G.R. Panel No.	—		
TR No.	—		
Cent. Device	USED		
Stand off - Inches	1 1/2"		
Time Const. - Sec.	—		
Speed - F.P.M.	—		

REMARKS

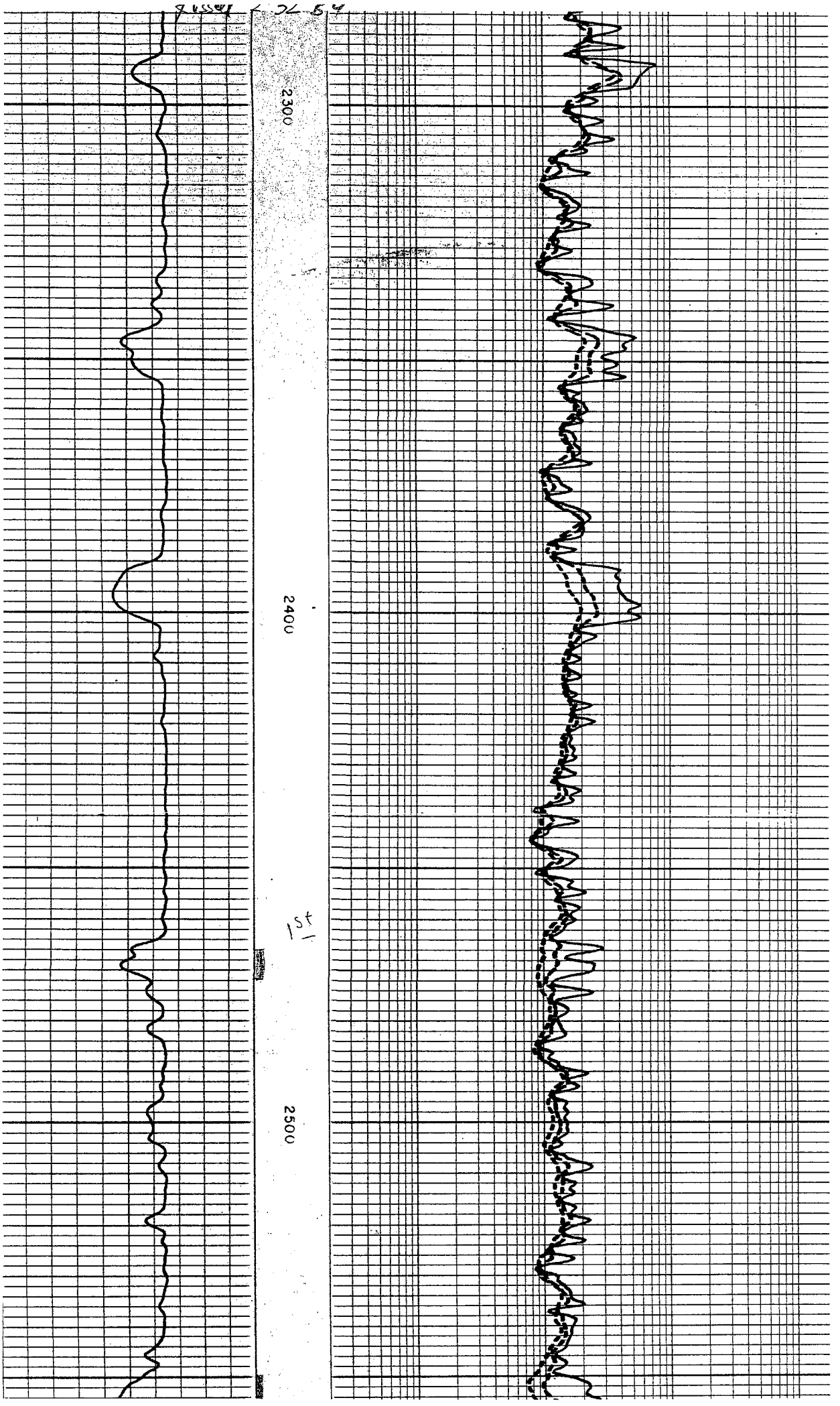
Service Order No. - 22452

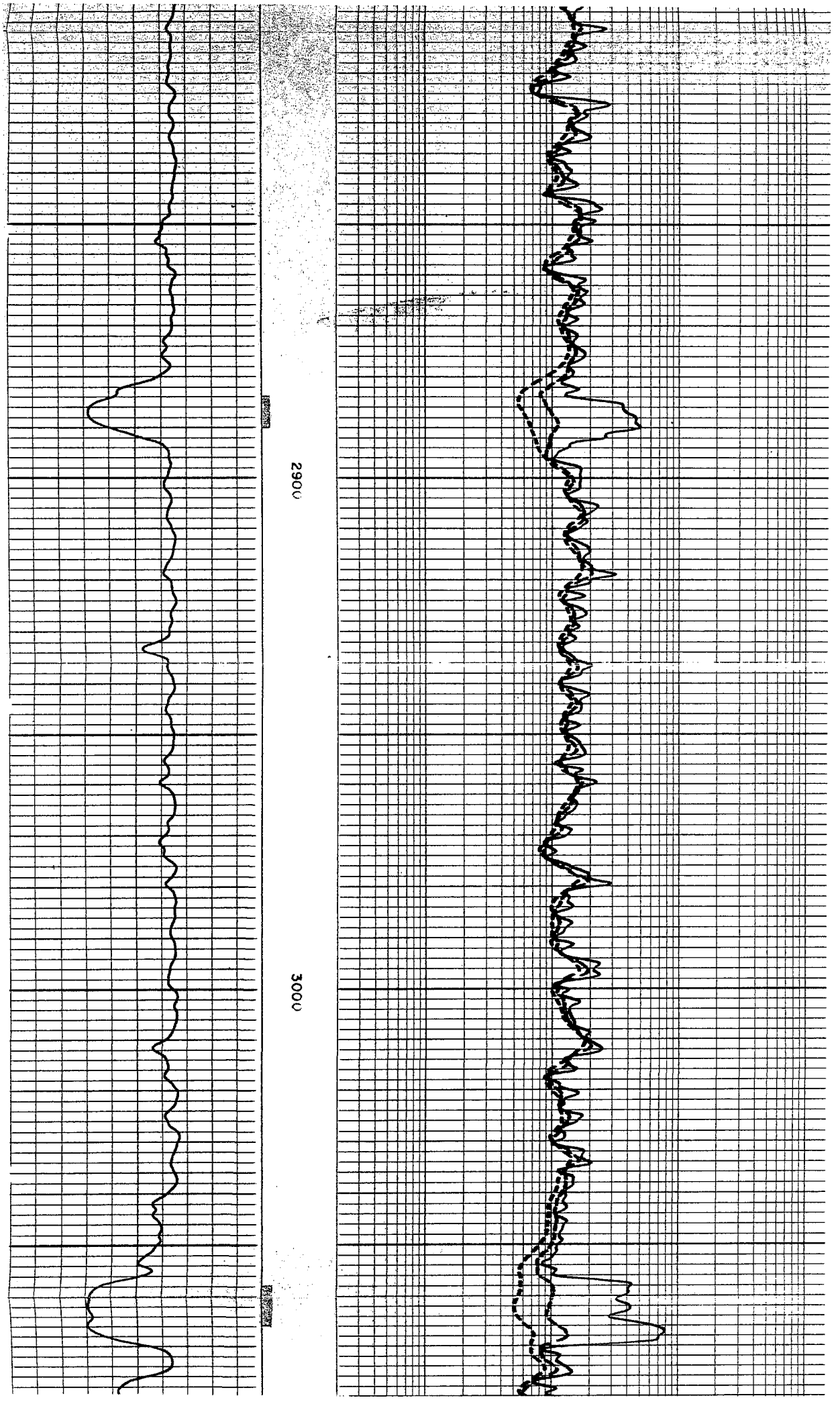
Exhibit D1

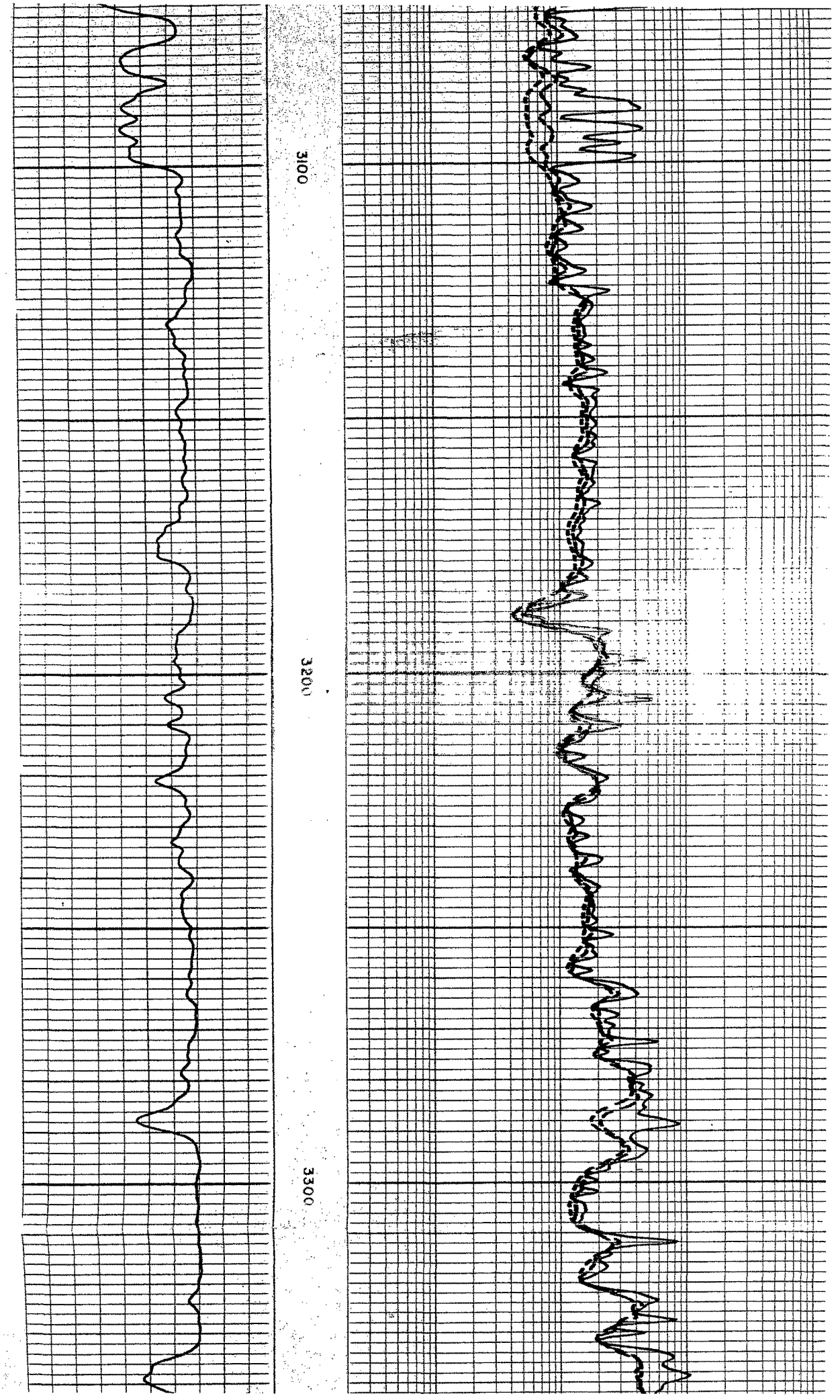
☑ Surface determined sonde errors used for 6FF40.
☐ 6FF40 sonde error corrected for inch borehole signal at R_m =
☐ 6FF40 zero set in hole at depth of feet.

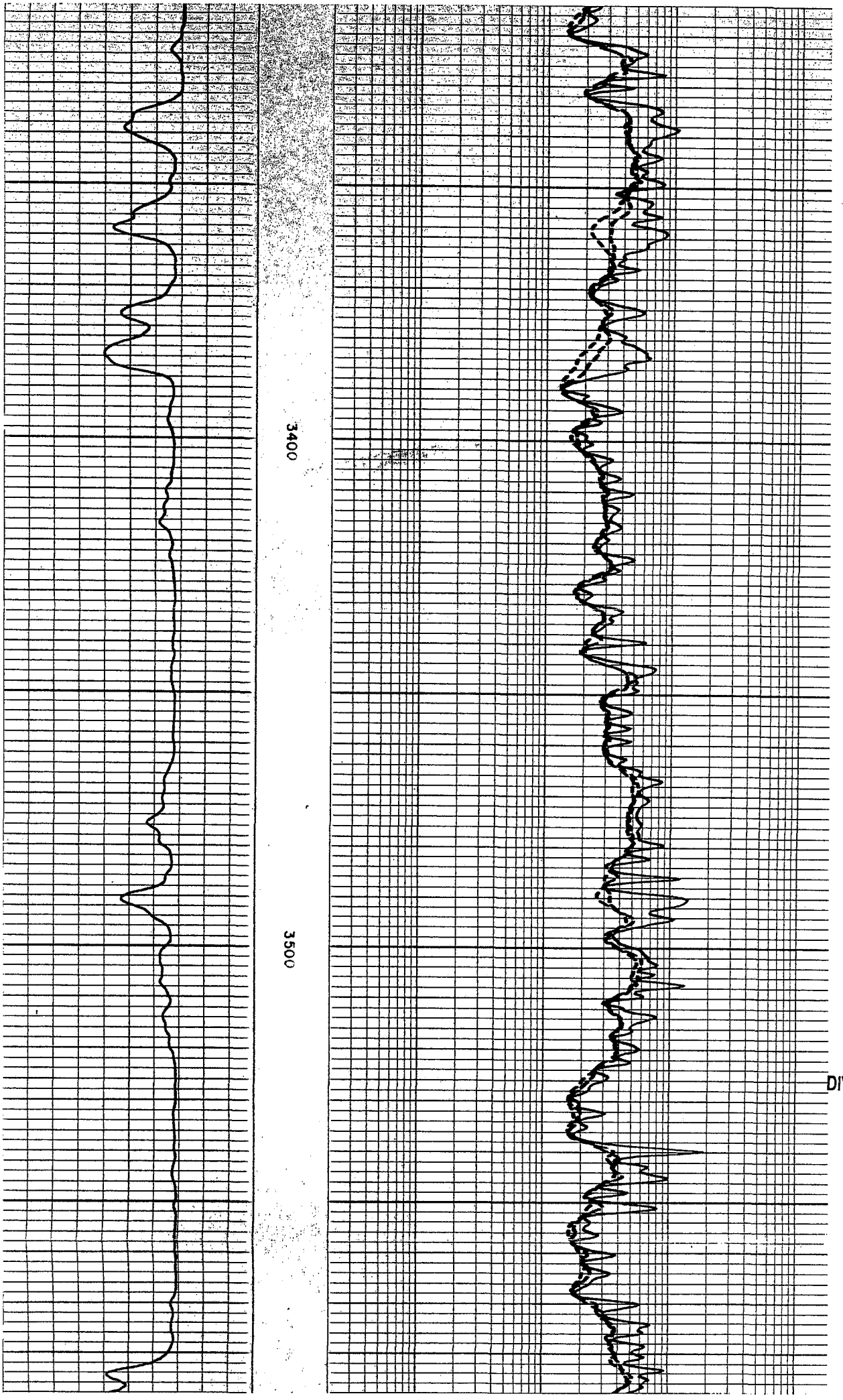
CALIBRATION DATA

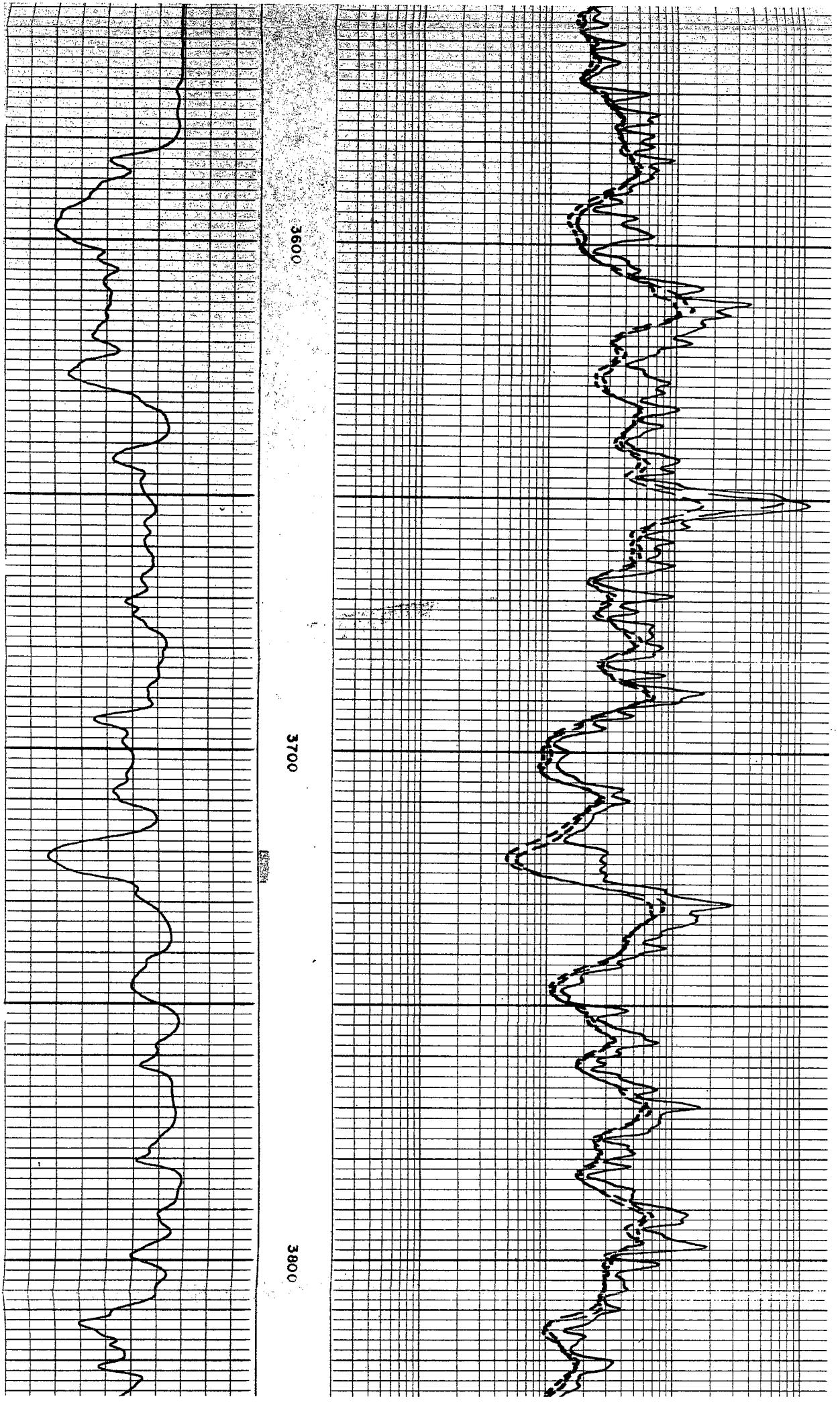
CALIBRATION:	BACKGND. CPS.	SOURCE CPS.	GALV. INCR. DIVISION	SENS. TAP (FOR CAL.)	SENS. TAP (RECORD)	TIME CONST.
GAMMA RAY:						

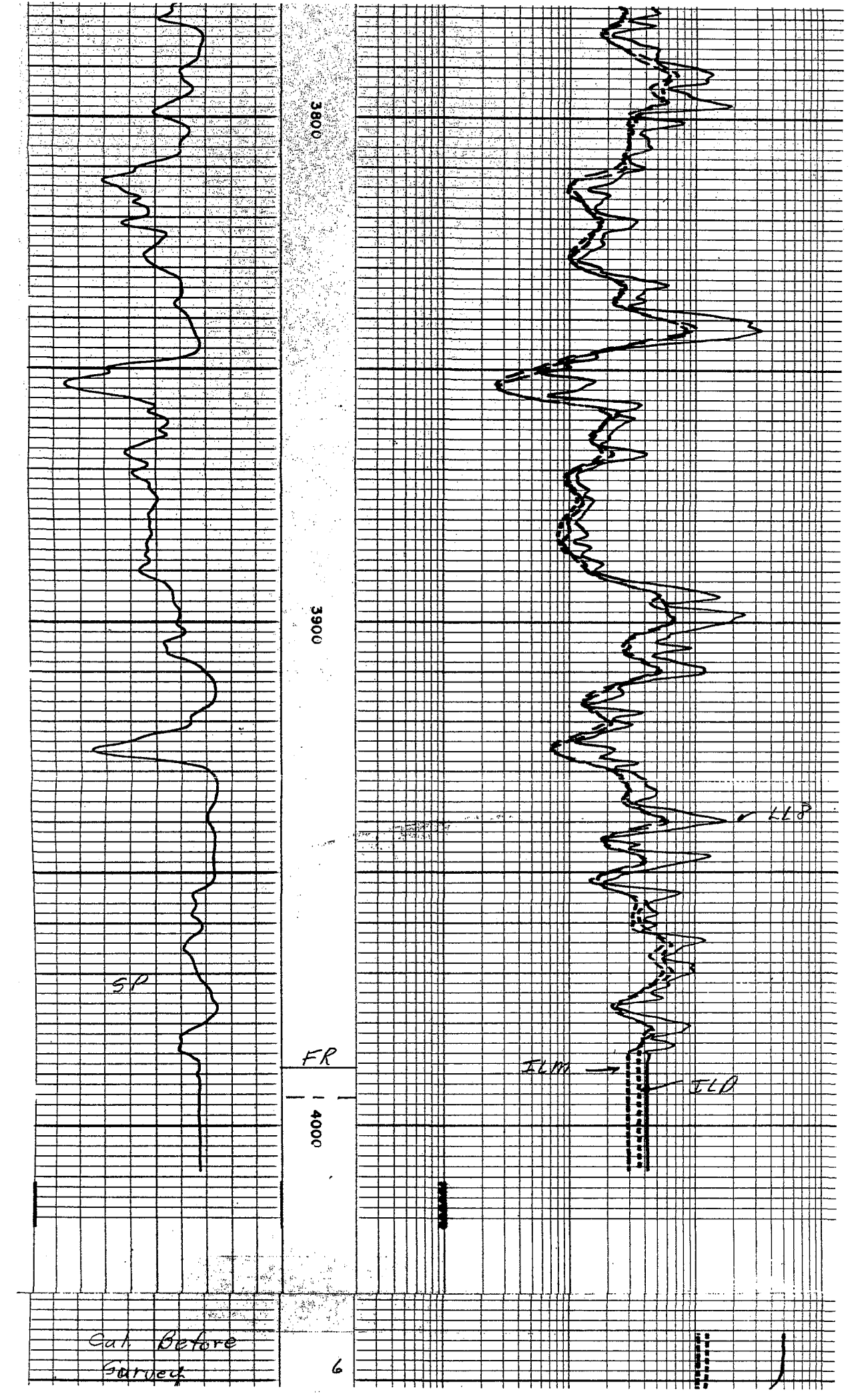












RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

T PI 8

Form OGCC-3

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other SWD Well

b. TYPE OF COMPLETION: NEW WELL XX WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR: Husky Oil Company of Delaware

3. ADDRESS OF OPERATOR: P. O. Box 380, Cody, Wyoming 82414

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface S½ NE (1919' FNL, 1317' FEL) Sec. 32, T2S, R4W
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.: FEE

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Russell

9. WELL NO.: SWDW 2-32 B4

10. FIELD AND POOL, OR WILDCAT: Altamont

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Section 32 T2S, R4W

14. PERMIT NO.: | DATE ISSUED:

12. COUNTY OR PARISH: Duchesne | 13. STATE: Utah

15. DATE SPUDDED: 3-21-75 | 16. DATE T.D. REACHED: 3-28-75 | 17. DATE COMPL. (*Ready to prod.*): 4-17-75 | 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*: 6145.8 KB, 6134 GL | 19. ELEV. CASINGHEAD: 6136

20. TOTAL DEPTH, MD & TVD: 4000 | 21. PLUG, BACK T.D., MD & TVD: 3936 | 22. IF MULTIPLE COMPL., HOW MANY*: | 23. INTERVALS DRILLED BY → ROTARY TOOLS: Total | CABLE TOOLS:

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 2464-3720 (gross interval) Duchesne River - Uinta

25. WAS DIRECTIONAL SURVEY MADE: no

26. TYPE ELECTRIC AND OTHER LOGS RUN: GHC-GR, DIL, CBL

27. WAS WELL CORED: no

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	40#	380'	12-1/4"	175 sacks	0
5-1/2"	15.5#	3982'	8-1/2"	1305 sacks	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	2412'	2391'

31. PERFORATION RECORD (*Interval, size and number*)
2464-2470, 2548-2558,
2630-2638, 2884-2890,
3054-3062, 3720-3726
(2 holes/ft.)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	none

33.* PRODUCTION

DATE FIRST PRODUCTION: | PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*): injecting into SWD well | WELL STATUS (*Producing or shut-in*): shut in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
4-17-75							

inj. FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
500 psig					3000 (est.)	

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): | TEST WITNESSED BY:

35. LIST OF ATTACHMENTS: Well history report, Cement Bond logs

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED R. Warren Johnston TITLE Senior Engineer DATE 4-24-75

*(See Instructions and Spaces for Additional Data on Reverse Side)

Schlumberger

DUAL INDUCTION - SFL

COMPANY: LINMAR ENERGY CORPORATION

WELL: BROTHERSON 2-35B5

FIELD: ALTAMONT
COUNTY: DUCHESNE
STATE: UTAH
NATION: USA
LOCATION: SE / NE

SEC: 35 TWP: 2S RGE: 5W

PERMANENT DATUM: GL
ELEV. OF PERM. DATUM: 5817.0 F
LOG MEASURED FROM: KB
20.0 F ABOVE PERM. DATUM
DRLG. MEASURED FROM: KB

DATE: 14 APR 84
RUN NO: 1 S 2

DEPTH-DRILLER: 10020.0 F
DEPTH-LOGGER: 9997.0 F
BTM. LOG INTERVAL: 9988.0 F
TOP LOG INTERVAL: 2511.0 F

CASING-DRILLER: 2508 F
CASING-LOGGER: 2511 F
CASING: 9.625

BIT SIZE: 8.75

-ELEVATIONS-
KB: 5837.0 F
DF: 5836.0 F
GL: 5817.0 F

PROGRAM
TAPE NO:
26.2
SERVICE
ORDER NO:
267137

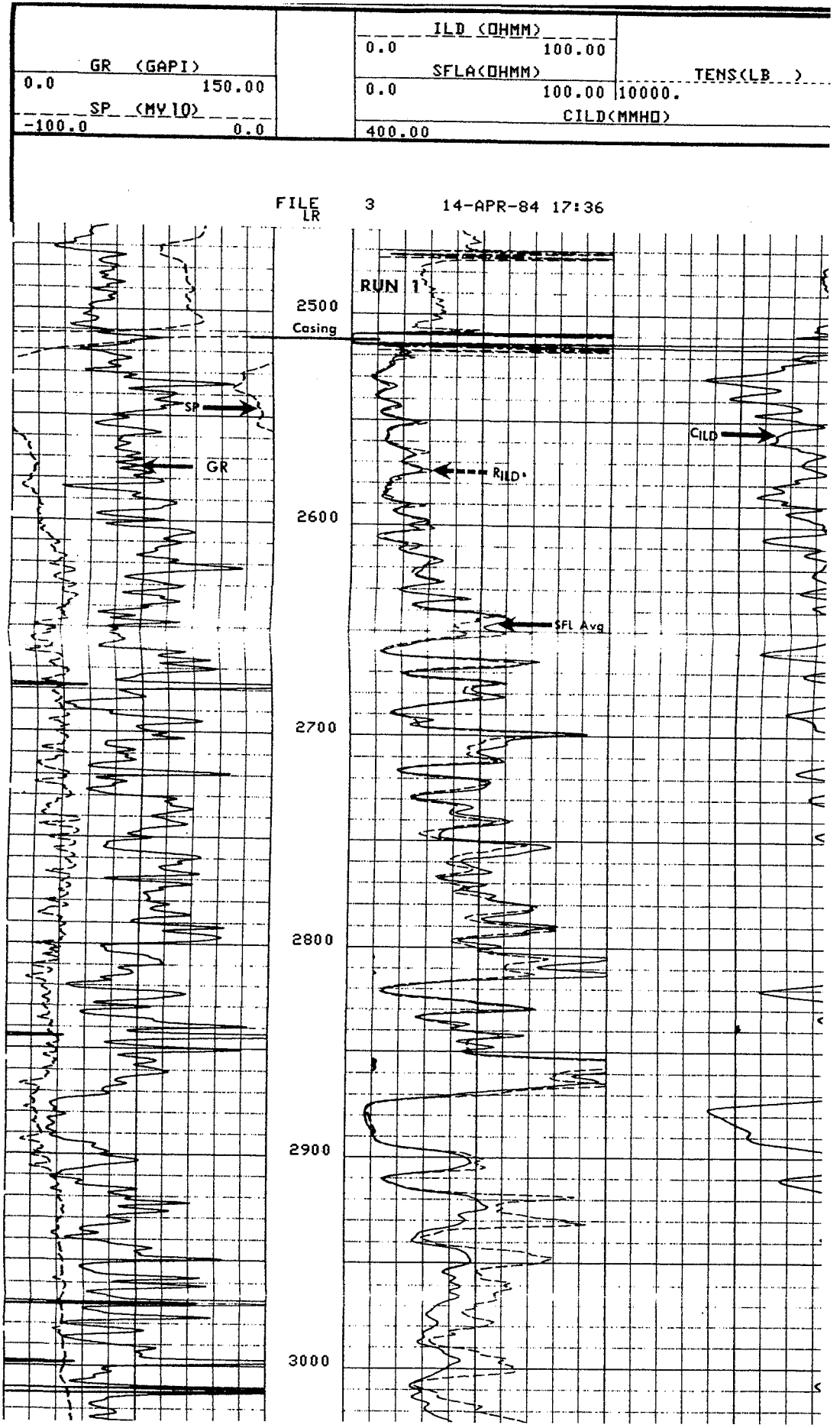
-OTHER SERVICES-
FDC
CNL
CYBERLOOK

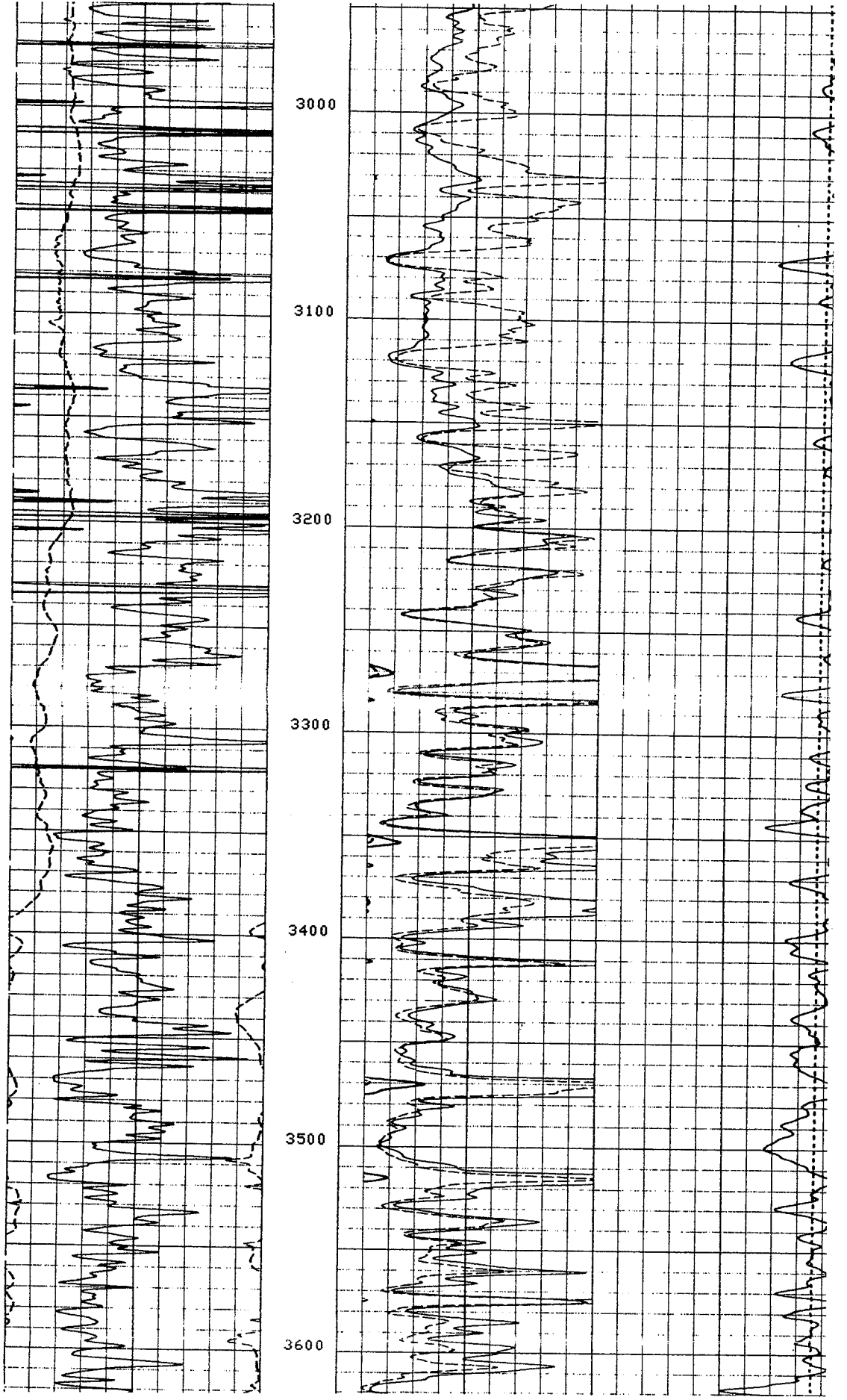
RUN 1

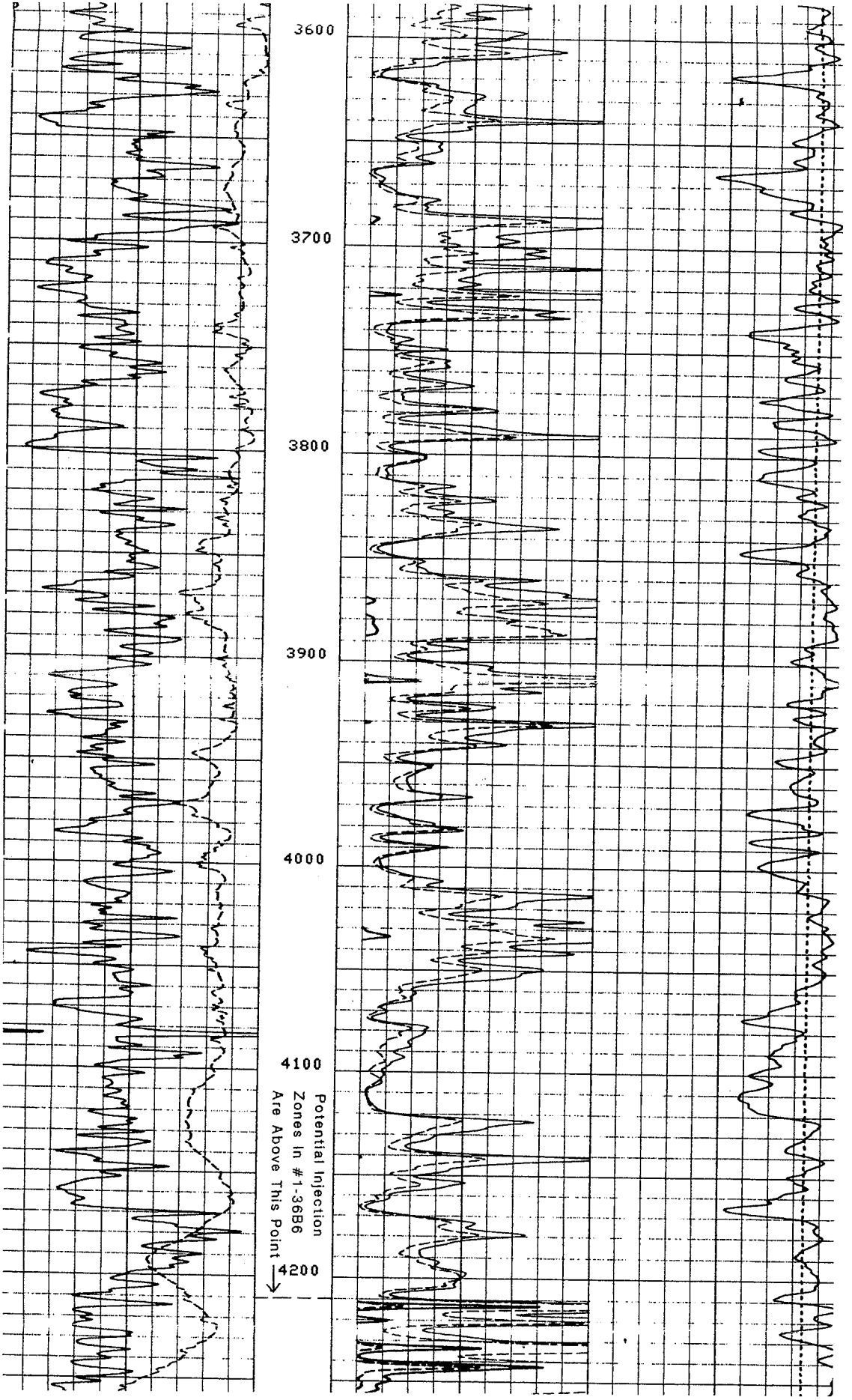
TYPE FLUID IN HOLE:	GEL-YP
DENSITY:	10.2 LB/G
VISCOSITY:	39.0 S
PH:	10.5
FLUID LOSS:	16.0 C3
SOURCE OF SAMPLE:	MUD TANK
RM:	.660 OHMM AT 70.0 DEGF
RMF:	.440 OHMM AT 70.0 DEGF
RMC:	.990 OHMM AT 70.0 DEGF
SOURCE RMF/RMC:	MEAS/CALC
RM AT BHT:	.260 OHMM AT 188. DEGF
RMF AT BHT:	.173 OHMM AT 188. DEGF
RMC AT BHT:	.390 OHMM AT 188. DEGF
TIME CIRC. STOPPED:	0900 4/14
TIME LOGGER ON BTM.:	1445 4 /14
MAX. REC. TEMP:	188.0 DEGF
LOGGING UNIT NO:	8305
LOGGING UNIT LOC:	VERNAL
RECORDED BY:	T. TEIPNER K. FOX
WITNESSED BY:	JIM GARCIA

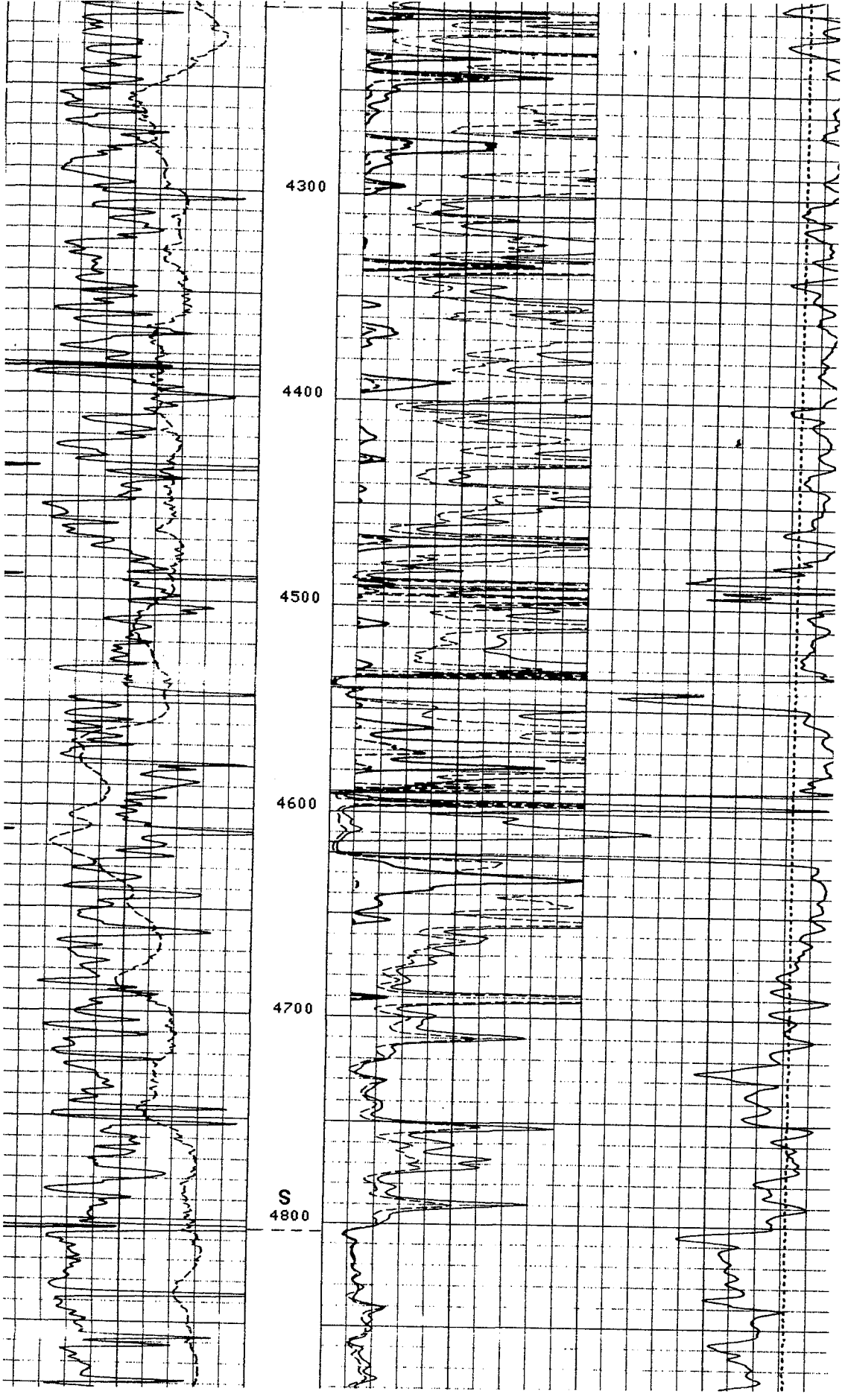
REMARKS:

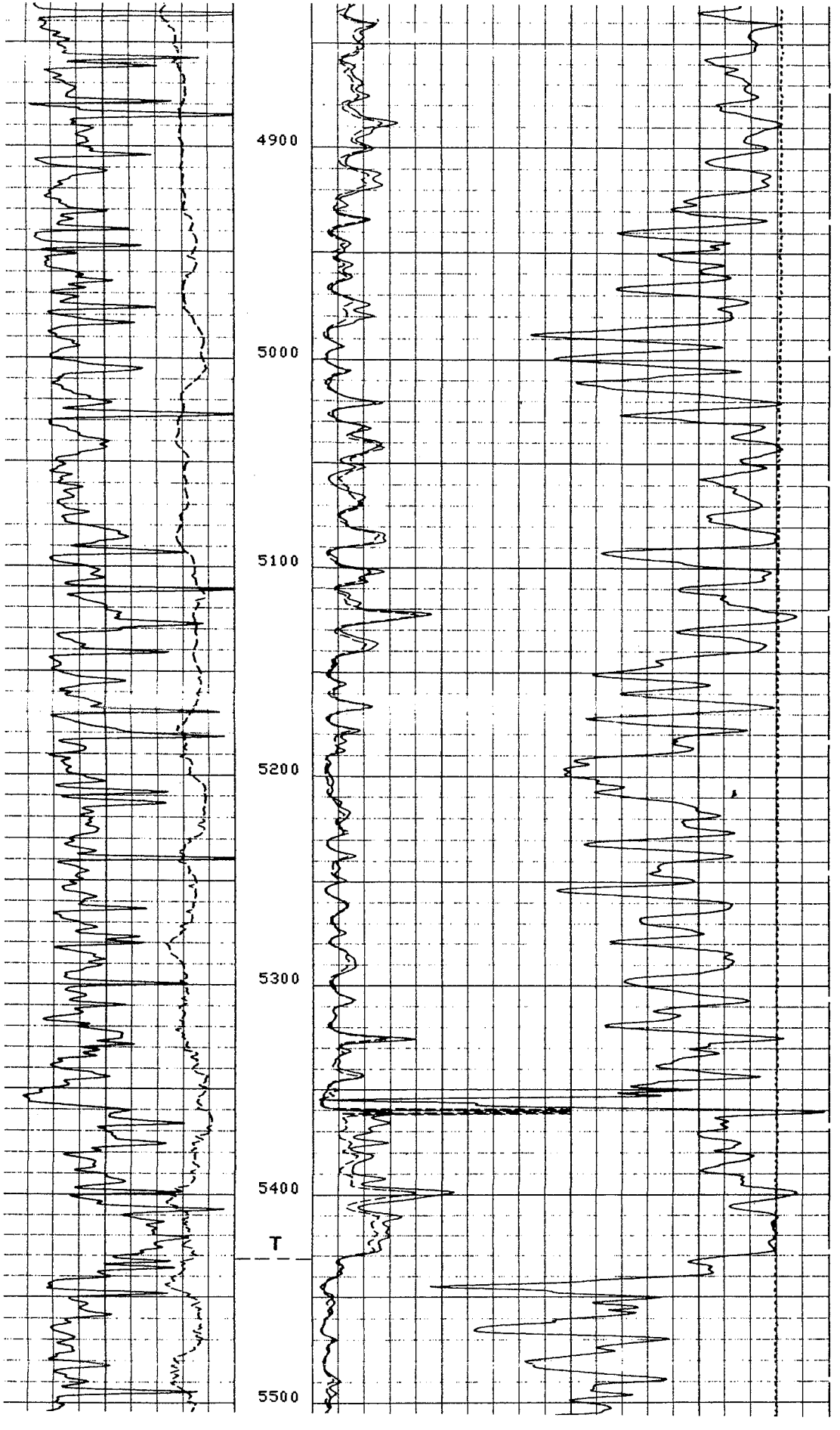
-Exhibit D2-











SWD CONVERSION PROCEDURE
Revision #1
June 12, 1997

RHOADES-MOON #1-36B5

Section 36-T2S-R5W
Altamont Field
Duchesne County, Utah

WELL DATA

Location: 1178' FEL, 1178' FNL
Elevation: 6077' GL; 6105' KB
Total Depth: 12,100' PBTD: 9390' (RBP)
Casing: 13-3/8" 48# H-40 @ 315' KB cmt'd to surf w/ 300 sks
9-5/8" 40# J-55(103 jts) and N-80 (38 jts) @ 5799' KB cmt'd w/ 600sks
7" 26# S-95 (64 jts) & N-80 (186 jts) @ 10,198' KB cmt'd w/ 380 sks
DV collar @ 8148' cmt'd w/ 590 sks.
5" 18# N-80 from 9,872' to 12,092' cmt'd w/ 210 sks

Tubing: 2-7/8" N-80 EUE 8 rd @ 8905' open ended.

TUBULAR DATA

Description	ID	Drift	Capacity (BPF)	Burst (PSI)	Collapse (PSI)
9-5/8" 40# J-55	8.835"	8.679"	.0773	3950	2570
9-5/8" 40# N-80	8.835"	8.679"	.0773	5750	3090
7" 26# S-95	6.276"	6.151"	.0382	8600	5870
7" 26# N-80	6.276"	6.151"	.0382	7240	5410
5" 18# N-80	4.276"	4.151"	.0177	10140	10490

WELL HISTORY

6/74 Initial completion. Perforate from 10,669' to 11,691', 2 SPF, 164 holes. Acidize w/ 20,000 gals 15% HCl. Prod 50 BOPD, 250 MCFPD, 125 BWPD.

4/76 Added perforations 10,214' to 11,548'. 374 holes. Acidize with 20,000 gals 7-1/2% HCl.
Prior Production: 15 BOPD, 60 MCFPD, 5 BWPD
Post Production: 75 BOPD, 225 MCFPD, 35 BWPD

2/81 Acidized w/ 10,000 gals 15% HCl
Prior Production: 15 BOPD, 60 MCFPD, 5 BWPD
Post Production: 25 BOPD, 75 MCFPD, 20 BWPD

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Form OGCC-3

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: HUSKY OIL COMPANY OF DELAWARE

3. ADDRESS OF OPERATOR: P. O. Box 380, Cody, Wyoming 82414

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 1178' FEL, 1178' FNL Sec 36, T2S, R5W
At top prod. interval reported below: Same
At total depth: Same

5. LEASE DESIGNATION AND SERIAL NO.: FEE
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME: Rhoades
9. WELL NO.: 1-36
10. FIELD AND POOL, OR WILDCAT: Altamont
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: 36 T2S-R5W
12. COUNTY OR PARISH: Duchesne
13. STATE: Utah

14. PERMIT NO. / DATE ISSUED:

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
3-16-74	5-22-74	7-4-74	6077 Gr. Ungraded	6077

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12095	11990		→		

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
11686-691, 11652-657, 11454-459, 11120-125, 10782-789, Wasatch
11662-673, 11616-621, 11175-179, 10854-870, 10756-765, 10669-679

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN: DUL. IND. LL-GR. BHCS-GR. FDC-CNL-GR.

27. WAS WELL CORED: NO

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8	48#	315 K.B.	17-1/2 "	300 sks class G 3% $CaCl_2$	
9-5/8	40#	5612 K.B.	12-1/4"	400 sks lite 200sks class G	
7	26#	10200 K.B.	8-1/2"	180 sks lite 200sks class G	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
5"	9872	12092	210 sks	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8	9772	9755
1-1/2	5026.56	

31. PERFORATION RECORD (*Interval, size and number*)
11686-691, 11454-459, 10756-765
11662-673, 11175-179, 10669-679
11652-657, 11120-125
11616-621, 10854-870
10782-789
2 jet shots per ft.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
All Perfs	20,000 Gal 15% HCL
	6,000# Unibeads
	600# Buttons
	264 Balls

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
6-12-74	Flowing	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
7-4-74	24	16/64		106	379	43	3575 SCF/BBL

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
300 PSIG			37	260	127	

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented (connection to gas plant)
TEST WITNESSED BY: Glynn Mayson

35. LIST OF ATTACHMENTS

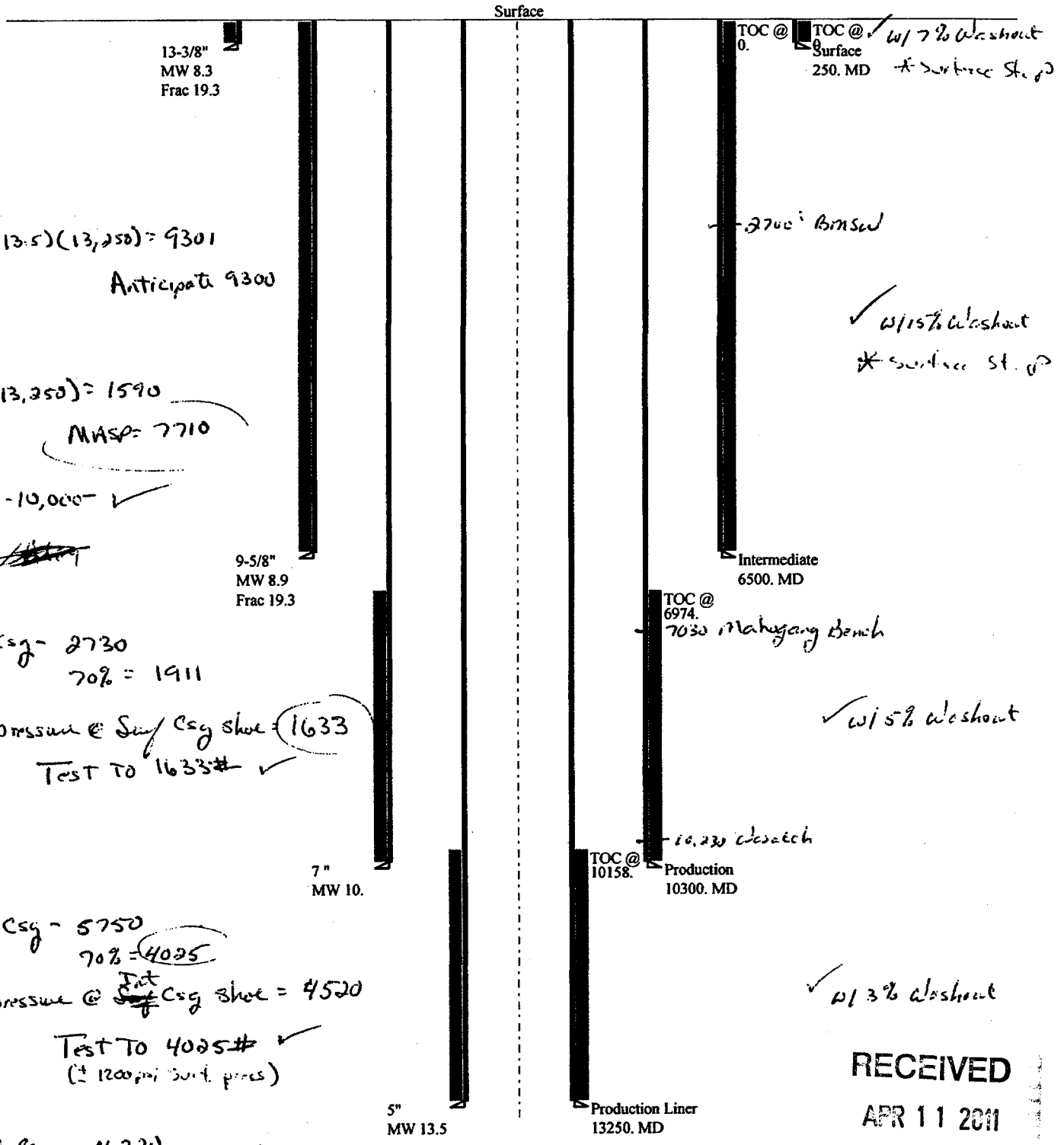
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Joe C Hugo TITLE PRODUCTION ENGINEER DATE 7-8-74

*(See Instructions and Spaces for Additional Data on Reverse Side)

04-06 El Paso Katherine 3-. ,B4

Casing Schematic



BHP

(.052)(13.5)(13,250) = 9301

Anticipate 9300

Gas

(.12)(13,250) = 1590

MASP = 7710

BOPE - 10,000 ✓

~~Annular~~ ✓

Surf Csg - 2730

70% = 1911

Max pressure @ Surf Csg shoe = 1633

Test to 1633# ✓

Int Csg - 5750

70% = 4025

Max pressure @ Int Csg shoe = 4520

Test To 4025# ✓

(+ 1200 psi surf. press)

Prod Csg - 11,220

70% = 7854

Max pressure @ prod csg shoe = 8651

Test To 7854# ✓

(+ 3400 psi surface press)

✓ Adequate Dec 4/6/11

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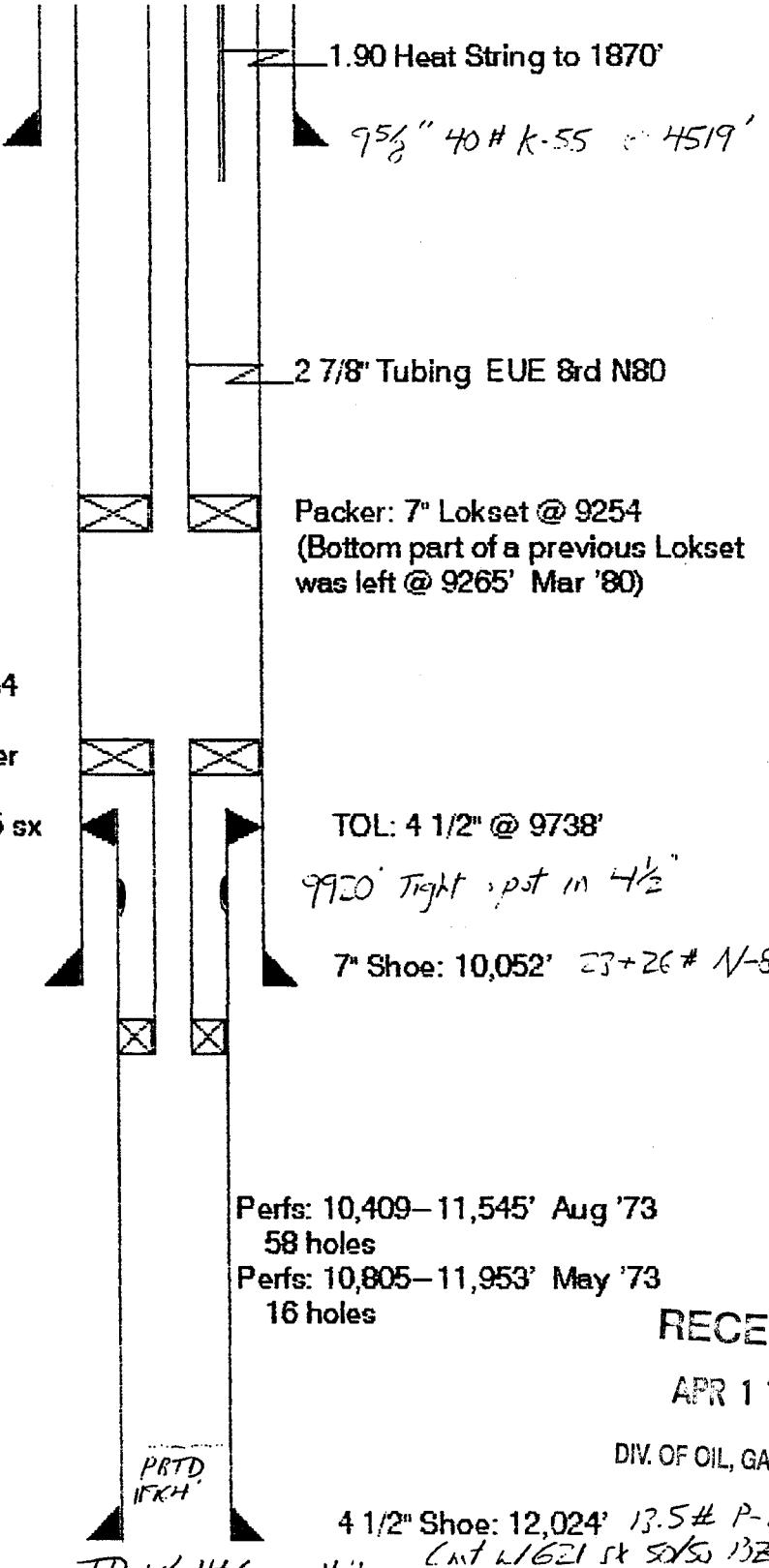
Exhibit E

7.02

CHRISTMAN BLANN 1–31B4

Sec 31; 2S; 4W



Average Production:
19 ~~25~~ BOPD
15) ~~125~~ BWPD
85 MCFD

Downhole Pump:
Jet

Surface Equipment:
J100 belt drive

Comments:
SWD line to L. Russel 2–32B4

2 7/8" Scab Liner
9399–10,350'
Cemented w/45 sx

Exhibit E1

31–Aug–94

IWM SWD 3-30 B4

Exhibit F

Operator/Landowner	Duchesne Co. Serial #	Address	Date Sent	Comments
Section 29				
Brent Farnsworth	2146	PO Box 153 Duchesne, UT 84021		Only Neighbor in vicinity, IWM purchased 9 additonal nine acres from Brent and he constructed the fence around our facility.
Section 30 & 31				
William A. Robinson	2147-2-1	243 E. Escondido Blvd # 518 Escondido CA 92025		
J. Christman	2151	146 Avenida Coto San Clemente, CA 92672		
Jerry A. Craysper and Joann Craysper	2148-2	840 E. House Mtn. Drive Cottonwood, AZ 86326		
Heidi Kennelly	2148-2-1	PO Box 2074 Mesquite, NV 89024		
Jose Luis Tomayo	2150	4200 Dennis Dr. SLC, UT 84120		
Antonio Gandera Jr. Trustee, Victoria Bell Gandera Trustee, SJ Christman Trustees	2157	14808 E. Sabine Dr. La Mirada, CA 90638		
Ronnie W. Case, Cristine Case	2152	PO Box 70161 SLC, UT 84170		
Duchesne /Wasatch Blue Bench Landfill	2158	Duchesne Co. Landfill C/O Manager P.O. Box 228 Duchesne, UT 84021		
Section 32				
Lois Bleazard Trustee	96792	PO Box 510033 Mountain Home, UT 84051		
Duchesne /Wasatch Blue Bench Landfill	2158	Duchesne Co. Landfill C/O Manager P.O. Box 228 Duchesne, UT 84021		
El Paso Exploration and Production		El Paso Exploration and Production Attention: Jordan Nelson Senior Production Engineer 1099 18th Street, Suite 1900 Denver, CO 80202		Operator in Sections 29, 30,31, 32 2S 4W

BEFORE THE DOGM in and for the STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF IWM SEEKING FOR ADMINISTRATIVE APPROVAL, PURSUANT TO RULE C-11, AUTHORIZING THE DRILLING OF AN INJECTION WELL AND THE UNDERGROUND DISPOSAL OF WATER PRODUCED AS A BY PRODUCT OF OIL AND GAS PRODUCTION

CERTIFICATE of MAILING

State of Utah
County of Duchesne

Robert L. Ballou, Agent for applicant, Integrated Water Management, deposes and affirms that on April 8th 2011 he caused to be deposited in the US mail, copies of the application as directed by the DOGM for the above entitled matter to the list referred to as Exhibit "F", and that the addresses given in that exhibit are correct to the best of the affiant's information and belief; such exhibit includes all lease holders, offset operators and surface owners within a 1/2 mile radius of the proposed SWD described in the application.

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Robert L. Ballou PG -Consultant

Subscribed and sworn to before me this 8th day of April 2011.

My commission expires: 10-18-13

Notary Public
DAVID K HIGGINSON
Commission #580427
My Commission Expires
October 18, 2013
State of Utah

Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066
Office 435-722-3555 Fax 435-722-3556 Cell 435-724-2500
rballou@stratanet.com
March 24, 2011

Re: SWD Well project for Integrated Water Management.

To all mineral and surface owners:

By way of introduction, my name is Bob Ballou and as a professional registered geologist, I have been retained by Integrated Water Management (IWM) to assist them in permitting, business development and operations for their SWD facility in Duchesne Co., Utah. IWM has permitted a SWD well to be drilled and utilized in conjunction with its current operation of processing and storing produced oilfield water in SWD evaporation pits.

As part of the permitting process to drill a new SWD well it is a DOGM requirement that all offset operators (El Paso), and all entities with ownership of mineral interests and surface interests within a 1/2 mile radius of the proposed well bore be notified.

The IWM facility is located about 8 miles north of Duchesne just east of Hwy 87 and north of the Duchesne Co. Landfill. The location of the facility is in the SE/SE of section 30 2S 4W. Currently the facility consists of 2 small lined containment ponds and 3 lined evaporation ponds with a calculated total fluid capacity of approximately 900,000 bbls.

Integrated Water Management LLC was formed as a service entity and operator in Duchesne County, Utah to provide oilfield service in the form of a produced water disposal facility serving producing operators primarily in Duchesne Co., Utah.

Background:

After securing a conditional use permit and the proper business licenses from Duchesne County, and after a permitting and construction phase in the summer and fall of 2010, which included purchasing and cleaning up the Grant Bleazard disposal facility (an environmental eyesore that had been idle for over 20 years), a fully bonded and DOGM approved Integrated Water Management (IWM) commenced operations in December.

Operations have exceeded expectations and the volume of fluids has increased to several thousand barrels a day from a number of different operators including El Paso, Bill Barrett Resources, Gasco, Newfield Production, Berry Petroleum and others.

For a number of reasons the decision was made to initiate the permitting process for drilling a new SWD well on IWM's property. The footprint for the actual SWD well will be very small and aside from the well head and pump house no additional equipment will be installed at the IWM facility, as IWM will utilize their current unloading and in place tank farms for normal operations.

In short the addition of a SWD well at IWM's current location will provide a means wherein IWM can increase the capacity to their pits without depending solely on evaporation. SWD wells have been successfully utilized by various operators in this portion of the basin since the first wells were drilled in the early 70's. Geologically the sands are well suited to receive the injected fluids with the fluid injected well below frac gradient pressures.

Currently there are eight SWD wells within 6 miles of the IWM proposed SWD well location and collectively they have disposed of tens of millions of bbls of produced water with no reported ill effects.

A complete copy of the permit is located at the DOGM offices in Salt Lake City, Utah and can be reviewed by request. Additionally should any question arise concerning the nature or scope of the project please do not hesitate to contact me.

Thank you,

Robert Ballou

Ballou Geologic Consulting

cc. IWM, DOGM, Duchesne Co.

enc.

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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

APPLICATION FOR INJECTION WELL

Name of Operator	Utah Account Number	Well Name and Number
Integrated Water Management	N	IWM SWD 3-30 B4
Address of Operator	**Phone Number**	**API Number**
PO Box 430 CITY Altamont STATE UT ZIP 84001	(435) 454-4646	
Location of Well		**Field or Unit Name**
Footage : 800' FEL, 300' FSL County : Duchesne		**Lease Designation and Number**
QQ, Section, Township, Range: SESE 30 2S 4W State : UTAH		

Is this application for expansion of an existing project?		Yes ☐	No ☑
Will the proposed well be used for:	Enhanced Recovery?	Yes ☐	No ☐
	Disposal?	Yes ☑	No ☐
	Storage?	Yes ☐	No ☐
Is this application for a new well to be drilled?		Yes ☑	No ☐
If this application is for an existing well, has a casing test been performed?		Yes ☐	No ☐

Date of test: _____

Proposed injection interval: from 4,000 to 5,500

Proposed maximum injection: rate 5,000 bpd pressure 800 psig

Proposed injection zone contains oil ☑, gas ☐, and / or fresh water ☐ within ½ mile of the well.

List of attachments: Attached are write up with exhibits

ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Robert Ballou Title PG- Consultant

Signature Robert Ballou Date 4/7/2011

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(5/2002)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO:	6. SURFACE: Fee

1A. TYPE OF WORK: DRILL ☑ REENTER ☐ DEEPEN ☐

7. IF INDIAN, ALLOTTEE OR TRIBE NAME:

B. TYPE OF WELL: OIL ☐ GAS ☐ OTHER SWD SINGLE ZONE ☑ MULTIPLE ZONE ☐

8. UNIT or CA AGREEMENT NAME:

2. NAME OF OPERATOR: Integrated Water Management

9. WELL NAME and NUMBER: IWM SWD 3-30 B4

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER: (435) 454-4646

10. FIELD AND POOL, OR WILDCAT:

4. LOCATION OF WELL (FOOTAGES)

AT SURFACE: 800' FEL, 300' FSL

AT PROPOSED PRODUCING ZONE: Proposed Injection Interval: 4000'-5500'

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE:
8 miles North and 1 mile East of Duchesne, Utah

12. COUNTY: Duchesne

13. STATE: UTAH

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET)	16. NUMBER OF ACRES IN LEASE:	17. NUMBER OF ACRES ASSIGNED TO THIS WELL:
300'		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET)	**19. PROPOSED DEPTH:**	**20. BOND DESCRIPTION:**
1632', Christman Blann 1-31 B4	5,500	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.):	**22. APPROXIMATE DATE WORK WILL START:**	**23. ESTIMATED DURATION:**
Gr 6128'		

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4"	9 5/8"	J55	40#	500	
8 3/4"	7"	J55	23-29#	5,500	

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

☐ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☐ COMPLETE DRILLING PLAN
☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Robert Ballou TITLE PG- Consultant

SIGNATURE Robert Ballou DATE 4/7/2011

(This space for State use only)

API NUMBER ASSIGNED: _____ APPROVAL:

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DIV. OF OIL, GAS & MINING

(11/2001) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

APPLICATION FOR INJECTION WELL

Name of Operator	Utah Account Number	Well Name and Number
Integrated Water Management	N	IWM SWD 3-30 B4
Address of Operator	**Phone Number**	**API Number**
PO Box 430 CITY Altamont STATE UT ZIP 84001	(435) 454-4646	
Location of Well		**Field or Unit Name**
Footage : 800' FEL, 300' FSL County : Duchesne		**Lease Designation and Number**
QQ, Section, Township, Range: SESE 30 2S 4W State : UTAH		

Is this application for expansion of an existing project?		Yes ☐	No ☑
Will the proposed well be used for:	Enhanced Recovery?	Yes ☐	No ☐
	Disposal?	Yes ☑	No ☐
	Storage?	Yes ☐	No ☐
Is this application for a new well to be drilled?		Yes ☑	No ☐
If this application is for an existing well, has a casing test been performed?		Yes ☐	No ☐

Date of test: _____

Brad—
1 & 2 copies—

www.petrosys.com.au

Proposed injection interval: from 4,000 to 5,500

Proposed maximum injection: rate 5,000 bpd pressure 800 psig

Proposed injection zone contains oil ☑, gas ☐, and / or fresh water ☐ within ½ mile of the well.

List of attachments: Attached are write up with exhibits

ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Robert Ballou Title PG- Consultant

Signature Robert Ballou Date 4/7/2011

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DIV. OF OIL, GAS & MINING

(5/2002)

REQUIREMENTS FOR CLASS II INJECTION WELLS INCLUDING WATER DISPOSAL, STORAGE AND ENHANCED RECOVERY WELLS SECTION V - RULE R615-5-2

1. Injection well shall be completed, equipped, operated, and maintained in a manner that will prevent pollution and damage to any USDW, or other resources and will confine injected fluids to the interval approved.

Integrated Water Management, a Utah Corporation is the operator of an existing SWD facility located 8 miles north and 1 mile east of Duchesne, Utah. IWM is bonded by the DOGM to conduct operations in its existing evaporation pits associated with its SWD operations. This application is submitted as support for IWM to drill and operate a commercial SWD well to be used in conjunction with current operations. Applicant proposes to dispose of such produced water by injection underground into the lower portion of the Duchesne River-Uintah formations underlying the proposed disposal well.

Applicant proposes to drill a SWD well to be designated the **IWM SWD 3-30 B4** and located 300 feet from the south line and 800 feet from the east line of section 30 2S, 4W, Duchesne, County, Utah. Location of the proposed drill site and other wells drilled within a 1/2 mile of the proposed location and surface owners are noted on exhibits A and B.

2. The application for an injection well shall Include a properly completed Form DOGM-UIC-1 and the following:

2.1 A plat showing the location of the injection well, all abandoned or active wells within a one-half mile radius of the proposed wells, and the surface owner and the operator of any lands or producing leases, respectively, within a one-half mile radius of the proposed injection well.

See Attachments **A** and **B.**

2.2 Copies of electrical or radioactive logs, including gamma ray logs, for the proposed well run prior to the installation of casing and indicating resistivity, spontaneous potential, caliper and porosity.

Triple combination (Electric log, Density/Neutron) logs will be run and will be provided to the DOGM.

2.3 A copy of a cement bond or comparable log run for the proposed injection well after casing was set and cemented.

A cement bond log (CBL) will be run and provided to the DOGM.

2.4 Copies of logs already on file with the Division should be referenced, but need not be re-filed.

All copies of logs in area of review are on file with the Utah Division of Oil, Gas and Mining.

2.5 A description of the casing or proposed casing program of the injection well and of the proposed method for testing the casing before use of the well.

The proposed casing program is 9-5/8", 40#, J-55 surface casing run to 500' GL, (cemented to surface), and 7" 23-29 # J-55 casing run from surface to approximately 5000-5500' (cemented to surface).

2.6 A statement as to the type of fluid to be used for injection, its source and estimated amounts to be injected daily.

The primary type and source of fluid to be used for injection will be production water that has been cleaned and gravity fed to IWM's disposal pit #3. The estimated average rate of injection will be 2000 BPD, and the estimated maximum rate of injection will be 5000 BPD.

2.7 Standard laboratory analysis of the fluid to be injected, the fluid in the formation into which the fluid is being injected, and the compatibility of the fluids.

Production water analysis will vary depending on the company and associated location that the production is coming from. Included are representative analysis of produced water from 3 IWM costumer wells . See **Exhibit C-A,C-B, C-C**. Included as **ExhibitC1** are water analysis reports from two SWD wells in the immediate vicinity, (both drilled as SWD wells and not as recompletions from a producing oil and gas well, to a SWD well). These wells are;

To the east of the proposed IWM SWD 3-30 B4, **The Russell SWDW 2-32B4**.

To the west of the proposed IWM SWD 3-30 B4, the **LDS Church 2-27 B5).**

These water analysis reports are from actual swab tests of specific intervals and show that formation water from produced water and in the proposed injection interval, the Duchesne River-Uintah formations, are unfit for domestic livestock, irrigation or other general uses.

It is proposed that in the IWM SWD 3-30 B2, IWM will take two samples of formation water by production swab tests, one from the subsurface interval from 4000 to4875 feet and the other test will we taken below 4875 feet over an interval to be selected. We will notify the DOGM prior to taking such samples and conducting such tests in order that the DOGM may witness the tests and take independent samples if desired.

The proposed average and maximum injection pressures.

Judging from the data collected from the similar wells in the immediate area The proposed average injection pressure will be approximately 400 psig and the maximum injection pressure will not exceed 800 psig.

2.8 **Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining Interval that could enable the injected fluid or formation fluid to enter the fresh water strata.**

The minimum fracture gradient for the IWM SWD 3-30 B4 calculates at 0.733 psig/ft. However a gradient step rate test will be run on the well to determine the maximum injection pressure. Historically this has not been an issue in the SWD wells located within a township of the IWM SWD 3-30 B4 as they all have operated at pressures of less than 800#, some much less.

Additionally, the injection system will be equipped with high and low pressure shut down devices that will automatically shut in injection waters if a system blockage or leakage occurs. One way check valves will also ensure proper flow management. Relief valves will also be utilized for high-pressure relief

2.9 **Appropriate geological data on the injection interval and confining beds,**
Including the geologic name, lithologic description, thickness, depth, and
lateral extent

In the Russell SWDW 2-32B4 the gross injection zones are 2464'-3726', (2464-2470', 2548'-2558', 2630'-2638', 2884'-2890', 3054-3062', 3720'-3726', two holes per foot). Records from 1/86 to 9/10 show that this well disposed of 6,836,018 BW with a maximum tubing pressure of 830 # and an average tubing pressure of about 600#. Note: this figure does not include the unreported water that was put away from 1975-1986.

In the LDS 2-27 B5 the gross injection zones are 2088-2860, (2088'-2098', 2129'-2136', 2312'-2317', 2370'-2374', 2377'-2383', 2407'-2413', 2416'-2419', 2515'-2522', 2559'-2561', 2817'-2819', 2840'-2860' one hole per foot); Records from 1/86 to 9/10 show that this well disposed of 33,654,635 BW with a maximum tubing pressure of 550 # . Note: this figure does not include the unreported water that was put away from 1975-1986. All perforations in the Duchesne River-Uintah formations.

Note: The original scope of the project was to pattern the IWM SWD 3-30 B4 after the 2-32B4 and the 2-27 B5. However, after meeting with the DOGM it was agreed that due to possible environmental concerns a deeper injection interval horizon patterned after wells that injected into deeper horizons would satisfy DOGM concerns. The closest offset being the Rhodes 1-36 B5 a converted SWD well. Other close by wells that appear

to be similar to the proposed IWM SWD 3-30 B4 are the Tew 1-9 B5 a converted SWD well with a perferation interval of 3700-5800' and 5900-6400'. Also the Erich 2-11 B5 that has injected into 4 injection intervals: 3749-3985', 4027-4496,4576-5573',5607-5810'.

In the Rhodes 1-36 B5 the gross injection zone intervals are: 4114' to 5055' the original plan was to perforate from 5070'-4583' (phase I) and if needed phase II would be from 4452'-4052' with the injection packer set 4520' for phase I. Records show that phase I and phase II were perf'd and injected into. All perforations in the lower Uinta Fm. Since the well was put into service in January of 1999 it has taken 13,813,822 bbls (to 9/10) for an average per day total of 4168 BW/d.

The reservoir is composed primarily of clastic fluviatile, lacustrine, and transitional sediments and is composed of sandstones, siltstones and shales. Carbonates are also encountered increasing with depth with numerous sandstones containing waters of varying degrees of salinity, porosity and permeability.

The completion reports and logs of these three wells are included in exhibit D, D1,D2.

2.10 A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no conduit exists that could enable fluids to migrate up or down the wellbore and enter the Improper intervals.

Well bore diagrams of the Katherine 3-29 B4 and Christman Blann 1-31 B4 are included as **Exhibit E**. Both wells are producing wells with no reported casing issues.

.

2.11 An affidavit certifying that a copy of the application has been provided to all operators or owners, and surface owners within a one-half mile radius of the proposed injection well.

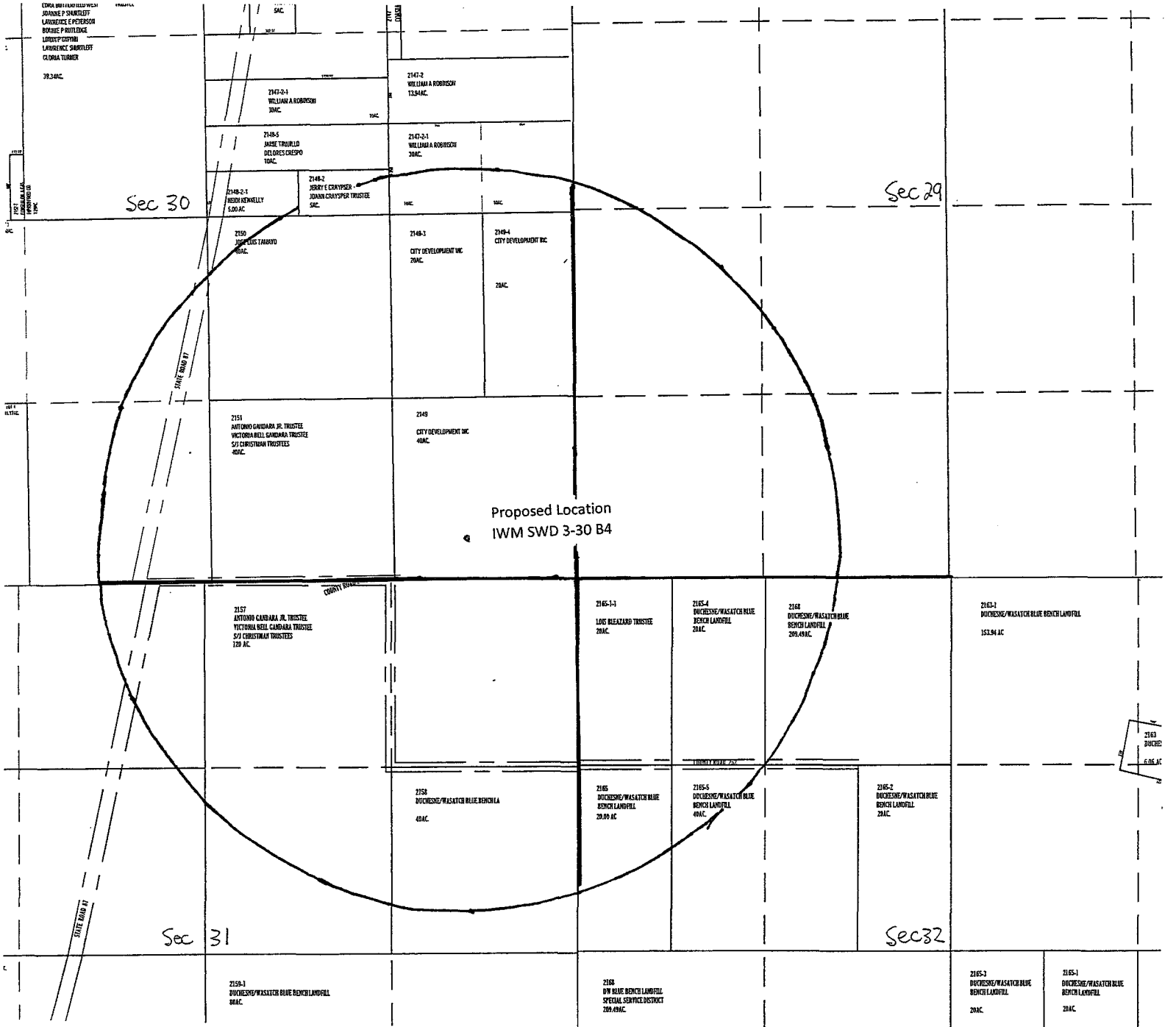
See **Exhibit F**.

2.12 Any other Information that the Board or Division may determine is necessary to adequately review the application.

The proposed injection zone is in the - Uintah Formation, upper Tgr fm. The IWM SWD 3-30 B4 well was patterned after the 1-36 B5 in closest in proximity to the IWM SWD 3-30 B2. The proposed injection zone will be determined by the porous intervals encountered in the drilling of the well but if

consistent with other nearby SWD wells (1-36 B5 as noted but also the Tew 1-9 B5, and the Erich 2-11 B5), the zones are expected to be from 4000' to 5500'. The confining stratum directly above the injection zone is the Duchesne River formation and below the injection zones is the Green River Formation.

Integrated Water Management will supply any additional information requested by the Utah Division of Oil, Gas and Mining.



Integrated Water Management
IWM SWD 3-30 B4
Section 30 2S, 4W
Surface Owners within 1/2 mile radius
Exhibit A

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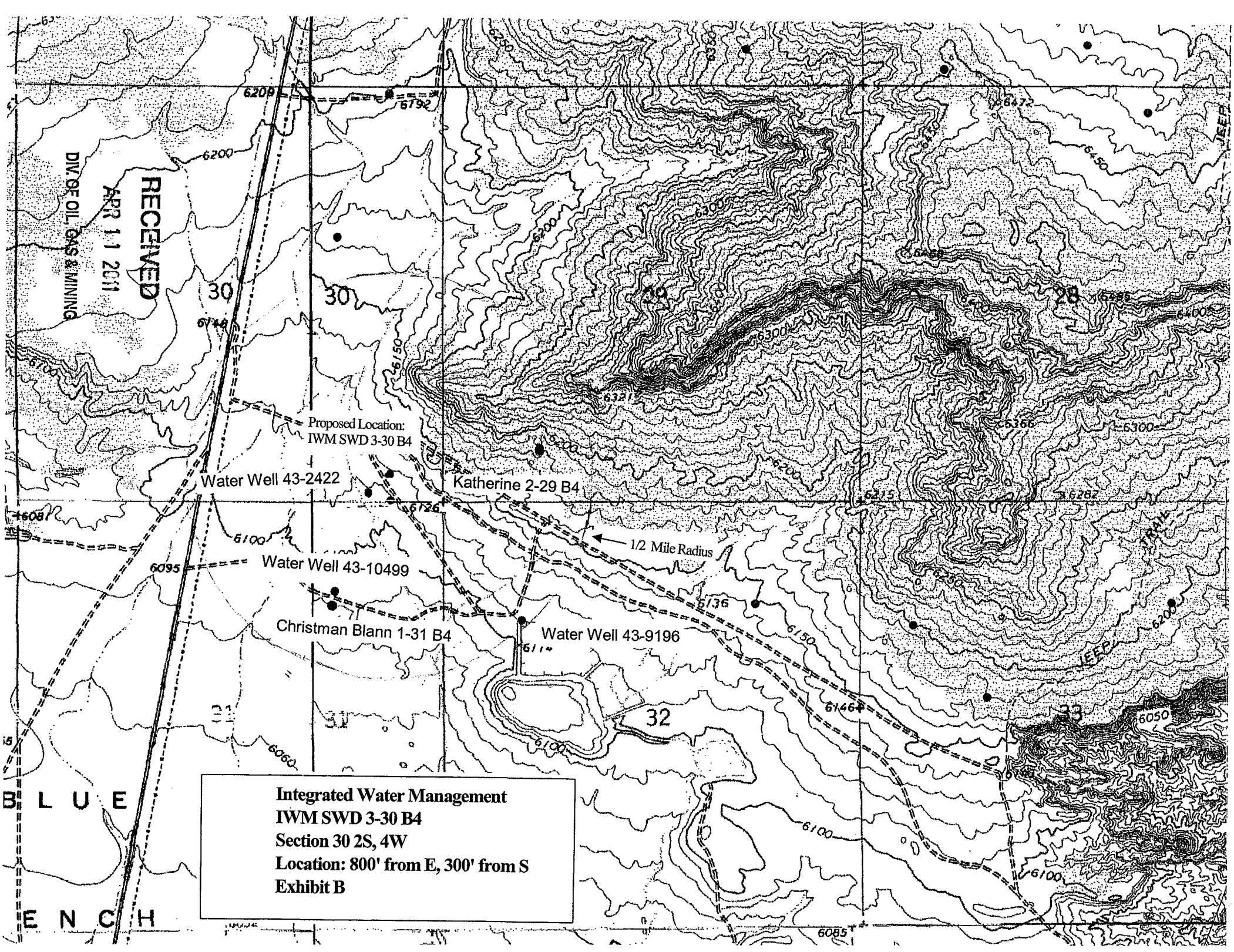
APR 11 2011
DIV. OF OIL, GAS & MINING


RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING
Proposed Location:
IWM SWD 3-30 B4
Water Well 43-2422
Katherine 2-29 B4
1/2 Mile Radius
Water Well 43-10499
Christman Blann 1-31 B4
Water Well 43-9196
Integrated Water Management
IWM SWD 3-30 B4
Section 30 2S, 4W
Location: 800' from E, 300' from S
Exhibit B
B L U E
E N C H

NALCO

1465 East 1650 south Vernal UT 84078 (435) 789-2069 www.nalco.com

Water Analysis Report

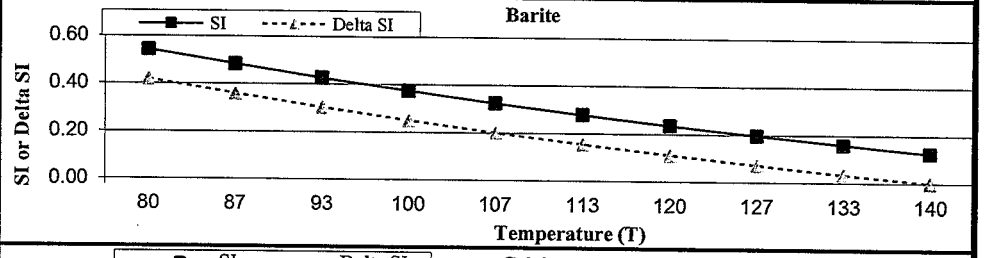
Field :	**Newfield**	**Sample Date :**	**4/18/2010**
County :		**Formation :**	
Location :	FENCELINE 2-23-8-16	**Rock Type :**	
Lab ID :		**Depth :**	**Analysed Date: 1/5/2011**
Comments :			

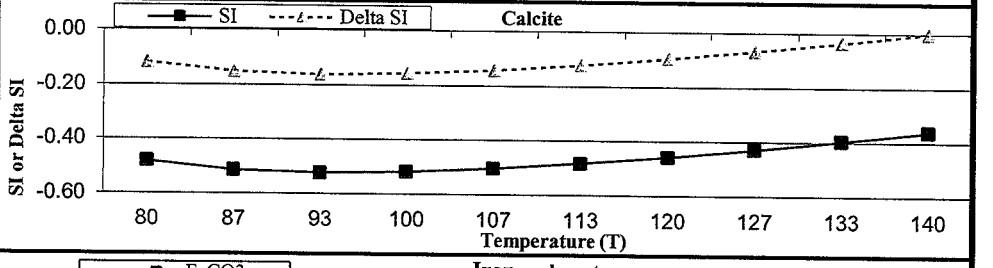
CATIONS	mg/l
Potassium	42.8
Sodium	6,776.3
Calcium	8.2
Magnesium	2.3
Iron	1.2
Barium	13.0
Strontium	0.0
SUM +	**6,843.8**

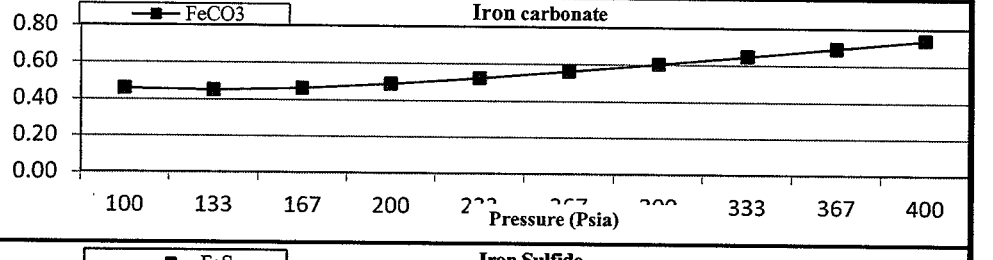
	Measured	Calculated
Total Dissolve Solid	17205.00	0.00
Total Hardness		29.93
PH	8.27	0.00
Total H2S aq	0.00	0.00
Manganese	1.38	
PO4 Residual	0.00	
SRB Vials Turned	-	
APB Vials Turned	-	

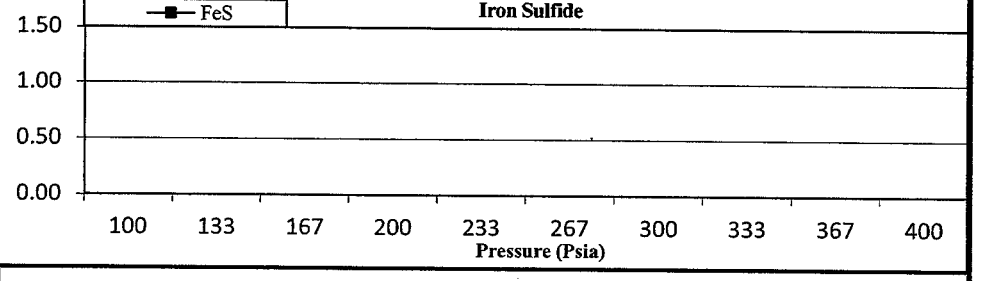
ANIONS	mg/l
Sulfate	10.0
Chloride	10,000.0
Carbonate	0.0
Bicarbonate	878.4
Bromide	0.0
Organic Acids	0.0
Hydroxide	0.0
SUM -	**10,888.4**

Initial(BH)	Final(WH)
Saturation Index values	
Calcite ($CaCO_3$)	
-0.36	-0.48
Barite ($BaSO_4$)	
0.12	0.54
Halite (NaCl)	
-3.01	-2.96
Gypsum	
-4.34	-4.35
Hemihydrate	
-4.90	-5.11
Anhydrite	
-4.32	-4.59
Celestite	
0.00	0.00
Iron Sulfide	
0.00	0.00
Zinc Sulfide	
0.00	0.00
Calcium fluoride	
0.00	0.00
Iron Carbonate	
0.74	0.46
Inhibitor needed (mg/L)	
Calcite	**NTMP**
0.00	0.00
Barite	**BHPMP**
0.00	0.00









Lab Manager: Andrea Craig
Analysis by:

Exhibit C-A

NALCO
1465 East 1650 south Vernal UT 84078 (435) 789-2069 www.nalco.com

Water Analysis Report

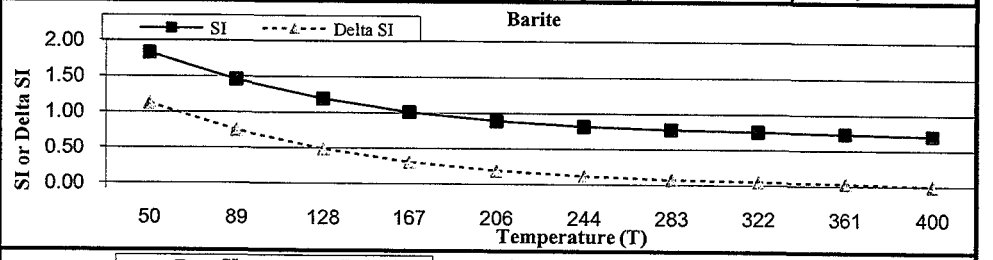
Field :	**Barrett**	**Sample Date :**	**8/16/2010**
County :		**Formation :**	
Location :	Prickly Pear Fed #12-24-12-14	**Rock Type :**	
Lab ID :		**Depth :**	**Analysed Date: 2/16/2011**
Comments :			

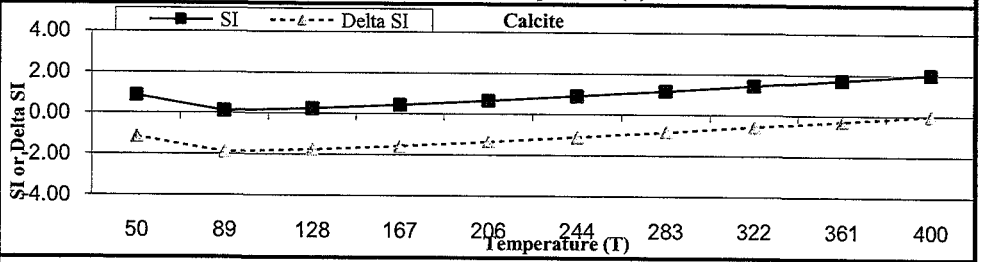
CATIONS	mg/l
Potassium	356.5
Sodium	15,909.1
Calcium	1,913.0
Magnesium	352.2
Iron	83.4
Barium	4.0
Strontium	0.0
SUM +	**18,618.2**

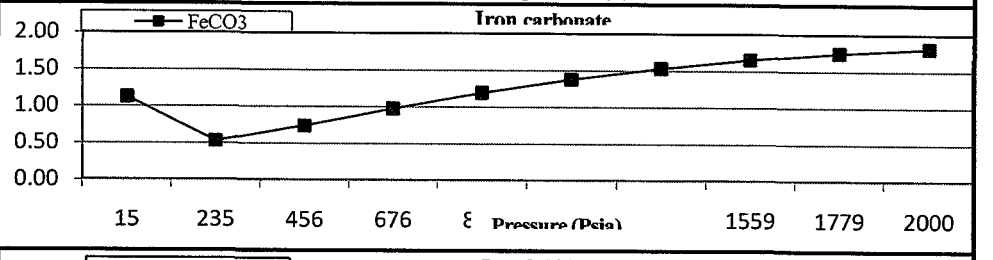
	Measured	Calculated
Total Dissolve Solid	48046.00	0.00
Total Hardness		6226.52
PH	6.79	0.00
Total H2S aq	0.00	0.00
Manganese	0.12	
PO4 Residual	0.00	
SRB Vials Turned	0.00	
APB Vials Turned	0.00	

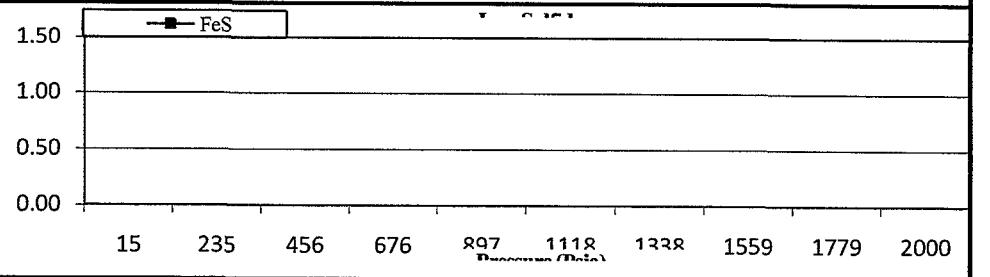
ANIONS	mg/l
Sulfate	1,040.0
Chloride	27,900.0
Carbonate	0.0
Bicarbonate	1,220.0
Bromide	0.0
Organic Acids	0.0
Hydroxide	0.0
SUM -	**30,160.0**

Initial(BH)	Final(WH)
Saturation Index values	
Calcite ($CaCO_3$)	
2.01	0.86
Barite ($BaSO_4$)	
0.70	1.82
Halite (NaCl)	
-2.08	-2.15
Gypsum	
-0.20	-0.42
Hemihydrate	
0.85	-1.21
Anhydrite	
1.28	-0.75
Celestite	
0.00	0.00
Iron Sulfide	
0.00	0.00
Zinc Sulfide	
0.00	0.00
Calcium fluoride	
0.00	0.00
Iron Carbonate	
1.81	1.12
Inhibitor needed (mg/L)	
Calcite	**NTMP**
105.51	0.00
Barite	**BHPMP**
8.91	*0.65*









Lab Manager: Andrea Craig
Analysis by:

Exhibit C-B

Production Water Report and Scaling Tendencies

Creg Wilkins 12/17/2003 Version : 947

Analysis by :	**Creg Wilkins**
Field :	
County :	**Uintah**
Lab ID# :	**El Paso Production**
Sample Date :	**13-Apr-09**
Location :	**2-9B4**
Formation :	
Depth :	
Rock Type:	
Porosity:	
Permeability:	

INPUT Sample Temp °F :	**60.0**
INPUT Downhole Temp °F :	**125.0**
INPUT Sample Press :	**6.0**
INPUT sample pH, su	**10.00**
Input mole % CO_2	**0.04**
pH resulting from CO_2	**10.02**
Calc Carbon Dioxide (Aq), mg/L	**0.2**
Carbon Dioxide, CO_2 mg/L	**0.0**
Total Sulfide, mg/L	**6.0**
Dissolved Oxygen, ppm	
Dissolved Oxygen, ppb	**0.0**

INPUT TDS @180 °C, mg/L	**54,491**
Calc TDS (less CO2), mg/L	**54,491**
INPUT Resistivity @ 68°F	**0.150**
Calculated Resistivity @ 68°F	**0.150**
Input Conductivity, µmhos/cm	**66,667**
Calc Cond@25 °C, µmhos/cm	**66,667**
INPUT Density @ STP, g/mL	**1.039**
Calc Density @STP, g/mL	**1.039**
MicroBiological - # of bottles turned	
SRBs :	**(1)**
Aerobic Bacteria :	**(1)**

K^+	**172.0**
Na^+	**20,990.9**
Na^+ by Diff	**+ 0.00**
Ca^{++}	**60.0**
Mg^{++}	**378.2**
Fe^{++}	**3.8**
Ba^{++}	**125.0**
Sr^{++}	**0.0**
Br^-	**0.0**
$SO_4^=$	**1,600.0**
Cl^-	**30,000.0**
$CO_3^=$	**1,560.0**
HCO_3^-	**1,342.0**
OH^-	**0.0**
Organic Acid	**0.0**

Note: Organic Acids as Acetate

Titrations - if values are placed in mls or digits - results will transfer to Water Report

Parameter	mls	Digits	Sample Size	Normality	Results
CO_2	0	0.0	100	3.636	
H_2S	0	0.0	10	0.3998	
T reading	0	0.0	100	8.0	
P reading	0	0.0	100	1.6	
Ca^{++}	0	0.0	50	0.8	
THardness	0	0.0	50	0.8	
Cl^-	0	0.0	1	2.256	

Comments: Mn .45

Exhibit C-c

B-1

PARTIAL

75 086

PLEASE NOTE: Sample cannot be analysed until all blanks are filled in (Slip must accompany sample)

STATE OF UTAH
DEPARTMENT OF SOCIAL SERVICES
DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113

DO NOT WRITE HE JAN. 16 19
Sample Received on
Analysis Authorization

WATER SAMPLE FOR CHEMICAL ANALYSIS ☒
WATER SAMPLE FOR RADIOLOGIC ANALYSIS ☐

RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

SAMPLE COLLECTED FROM: (check one)

Stream ☐ Spring ☐ Well ☒
City or Town water distribution system ☐
Other ☐ (describe) WASTE WATER INJECTION WELL

EXACT DESCRIPTION OF SAMPLING POINT: (see note on reverse side) WELL No. 2-27B5 SEC 27, T2S, R5W (USM) DUCHESNE CO.

~~STATE ENGINEER'S APPLICATION OR CLAIM NO.~~ FROM PERFORATIONS AT 2088 TO 2383 LEVEL

SUPPLY OWNED BY:

PRESENT USE OF SUPPLY:

PROPOSED USE OF SUPPLY:

SAMPLE COLLECTED BY: CLEON FEIGHT, OIL & GAS DIV. DATE:

REPORT RESULTS TO: R. WINSHAW RNA PHONE:

Address: BLDG 72.

DO NOT WRITE BELOW DOUBLE LINE

RESULTS OF ANALYSIS

Turbidity		J.T.U.	Iron (total) as Fe		mg/l
Conductivity	22,200	micromhos/cm	Iron in filtered sample as Fe		mg/l
pH	10.0		Lead as Pb		mg/l
Total Dissolved Solids	17560	17,560	Magnesium as Mg		mg/l
Alkalinity(total)as $CaCO_3$	4428	mg/l	Manganese as Mn		mg/l
Aluminum as Al		mg/l	Mercury as Hg		mg/l
Arsenic as As		mg/l	Nitrate as N		mg/l
Barium as Ba		mg/l	Nitrite as N		mg/l
Bicarbonate as HCO_3		mg/l	Phosphate as PO_4		mg/l
Boron as B		mg/l	Phenols as Phenol		mg/l
Cadmium as Cd		mg/l	Potassium as K		mg/l
Calcium as Ca		mg/l	Selenium as Se		mg/l
Carbonate as CO_3		mg/l	Silica as SiO_2		mg/l
Chloride as Cl	8000	mg/l	Silver as Ag		mg/l
Chromium(hexavalent)as Cr		mg/l	Sodium as Na	7000	mg/l
Copper as Cu		mg/l	Sulfate as SO_4	500	mg/l
Cyanide as CN		mg/l	Surfactant as MBAS		mg/l
Fluoride as F		mg/l	Zinc as Zn		mg/l
Hardness(total) as $CaCO_3$	12	mg/l	Total Alpha		pci/l
Hydroxide as OH		mg/l	Total beta		pci/l
Ammonia N as NH_3					i/l
					mg/l

SDH-San-49-Rev. 4/73

Exhibit C1

LITE RESEARCH LABORATORIES

P.O. Box 119 Fort Duchesne, Utah 84026 (801) 722-2254

LABORATORY NUMBER W-2129
SAMPLE TAKEN
SAMPLE RECEIVED 4-18-75
RESULTS REPORTED 4-18-75

SAMPLE DESCRIPTION

COMPANY Husky Oil Co. LEASE Russell FIELD NO. WELL NO. 2-32B4
FIELD Altamont COUNTY Duchesne STATE Utah
SAMPLE TAKEN FROM
PRODUCING FORMATION Duchesne River-Uinta TOP 2548-2558, 3726'
REMARKS

SAMPLE TAKEN BY Warren Johnston

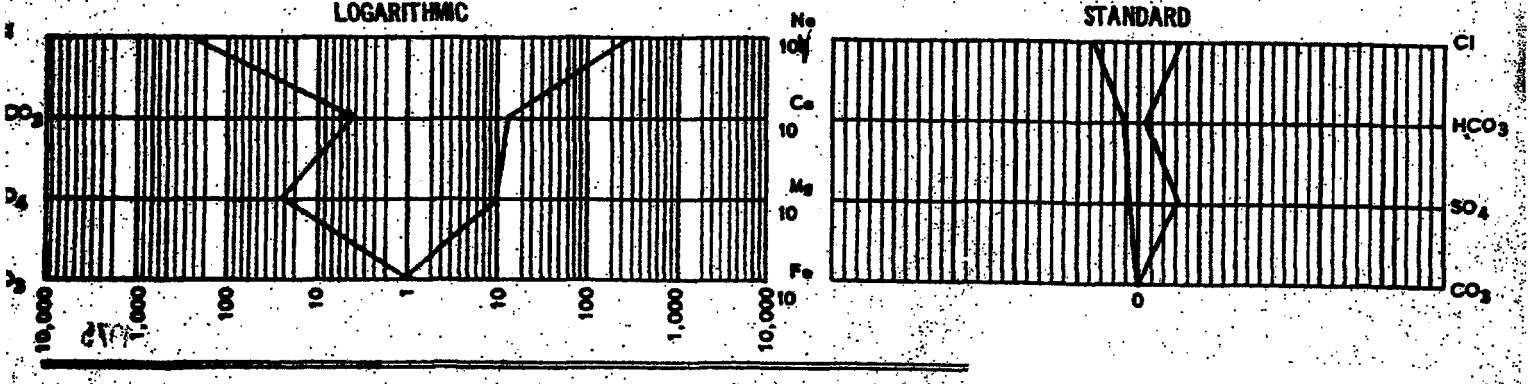
CHEMICAL AND PHYSICAL PROPERTIES

SPECIFIC GRAVITY @60/60° F. 1.0146 pH 8.28 RES. 0.30 OHM METERS @ 77°F

TOTAL HARDNESS 1155.47 mg/L as $CaCO_3$ TOTAL ALKALINITY 360.0 mg/L as $CaCO_3$

CONSTITUENT	MILLIGRAMS PER LITER mg/L	MILLEQUIVALENTS PER LITER MEQ/L		REMARKS
CALCIUM - Ca^{++}	273.0	13.65		
MAGNESIUM - Mg^{++}	114.0	9.34		
SODIUM - Na^{+}	8450.0	367.39		
BARIUM (INCL. STRONTIUM) - Ba^{++}	10.6	0.15		
TOTAL IRON - Fe^{++} AND Fe^{+++}	2.55	0.09	390.62	
BICARBONATE - HCO_3^{-}	360.0	5.90		
CARBONATE - CO_3^{--}	0	0		
SULFATE - SO_4^{--}	1500.0	31.25		
CHLORIDE - Cl^{-}	11695.3	329.45	366.69	
TOTAL DISSOLVED SOLIDS	20120.			

MILLEQUIVALENTS PER LITER



ANALYST
CHECKED

Exhibit C1

LITE RESEARCH LABORATORIES

P.O. Box 119 Fort Duchesne, Utah 84026 (801) 722-2254

LABORATORY NUMBER W-2123
SAMPLE TAKEN 4-17-75
SAMPLE RECEIVED 4-17-75
RESULTS REPORTED 4-17-75

SAMPLE DESCRIPTION FIELD NO.

COMPANY Husky Oil LEASE Russell WELL NO. 2-32B4

FIELD Altamont COUNTY Duchesne STATE Utah

SAMPLE TAKEN FROM

PRODUCING FORMATION Duchesne River-Uinta TOP 2464'-2470'

REMARKS

SAMPLE TAKEN BY

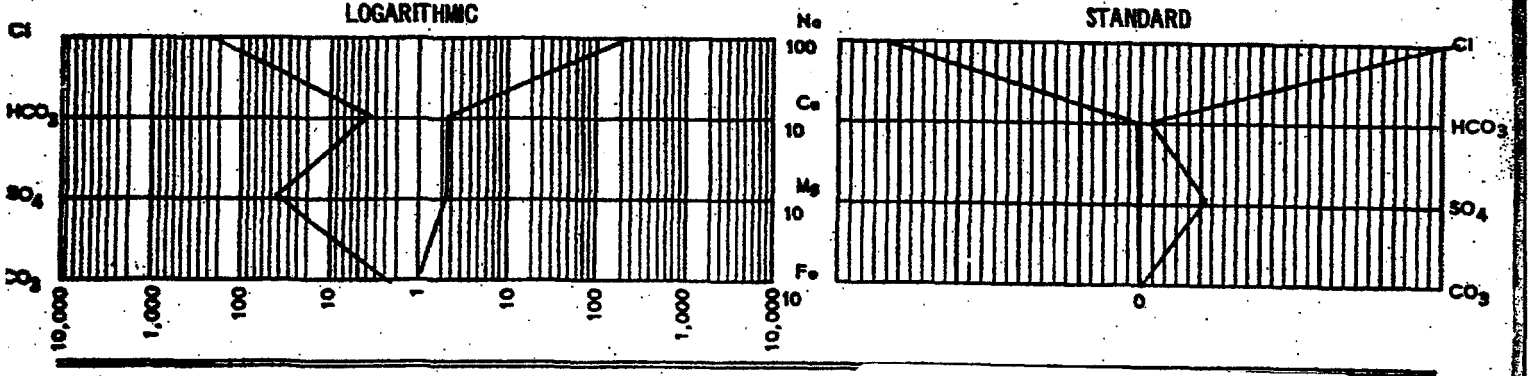
CHEMICAL AND PHYSICAL PROPERTIES

SPECIFIC GRAVITY @60/60° F. 1.0138 pH 8.91 RES. 0.50 OHM METERS @ 77°F

TOTAL HARDNESS 254.35 mg/L as $CaCO_3$ TOTAL ALKALINITY 352.0 mg/L as $CaCO_3$

CONSTITUENT	MILLIGRAMS PER LITER mg/L	MILLEQUIVALENTS PER LITER MEQ/L		REMARKS
CALCIUM - Ca ++	51.15	2.56		
MAGNESIUM - Mg ++	30.30	2.48		
SODIUM - Na +	4890.0	212.61		
BARIUM (INCL. STRONTIUM) - Ba ++	2.9	0.04		
TOTAL IRON - Fe++ AND Fe +++	1.07	0.04	217.73	
BICARBONATE - HCO_3^-	260.0	4.26		
CARBONATE - CO_3^{--}	92.0	3.07		
SULFATE - SO_4^{--}	2600.0	54.17		
CHLORIDE - CL^-	9596.2	270.32	331.82	
TOTAL DISSOLVED SOLIDS	17440.			

MILLEQUIVALENTS PER LITER



Al
Cl

Exhibit C1

(A)

PARTIAL

75 085

PLEASE NOTE: Sample cannot be analysed until all blanks are filled in (Slip must accompany sample)

STATE OF UTAH
DEPARTMENT OF SOCIAL SERVICES
DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113

DO NOT WRITE HERE
Sample Received on [illegible]
Analysis Authorization

WATER SAMPLE FOR CHEMICAL ANALYSIS ☒
WATER SAMPLE FOR RADIOLOGIC ANALYSIS ☐

RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

SAMPLE COLLECTED FROM: (check one)

Stream ☐ Spring ☐ Well ☒
City or Town water distribution system ☐
Other ☐ (describe) WASTE WATER INJECTION WELL

EXACT DESCRIPTION OF SAMPLING POINT: (see note on reverse side) WELL NO. 2-2785 Sec 27, T2S, R5W (USM) DUCHESNE Co.

~~STATE ENGINEER'S APPLICATION OR CLAIM NO.~~ FROM PERFORATIONS AT 2817 to 2860 LEVEL.

SUPPLY OWNED BY:

PRESENT USE OF SUPPLY:

PROPOSED USE OF SUPPLY:

SAMPLE COLLECTED BY: CLEON FEIGHT, OIL & GAS DIV. DATE:

REPORT RESULTS TO: R. HINSHAW ~~RW~~ PHONE:

Address: BLDG 72.

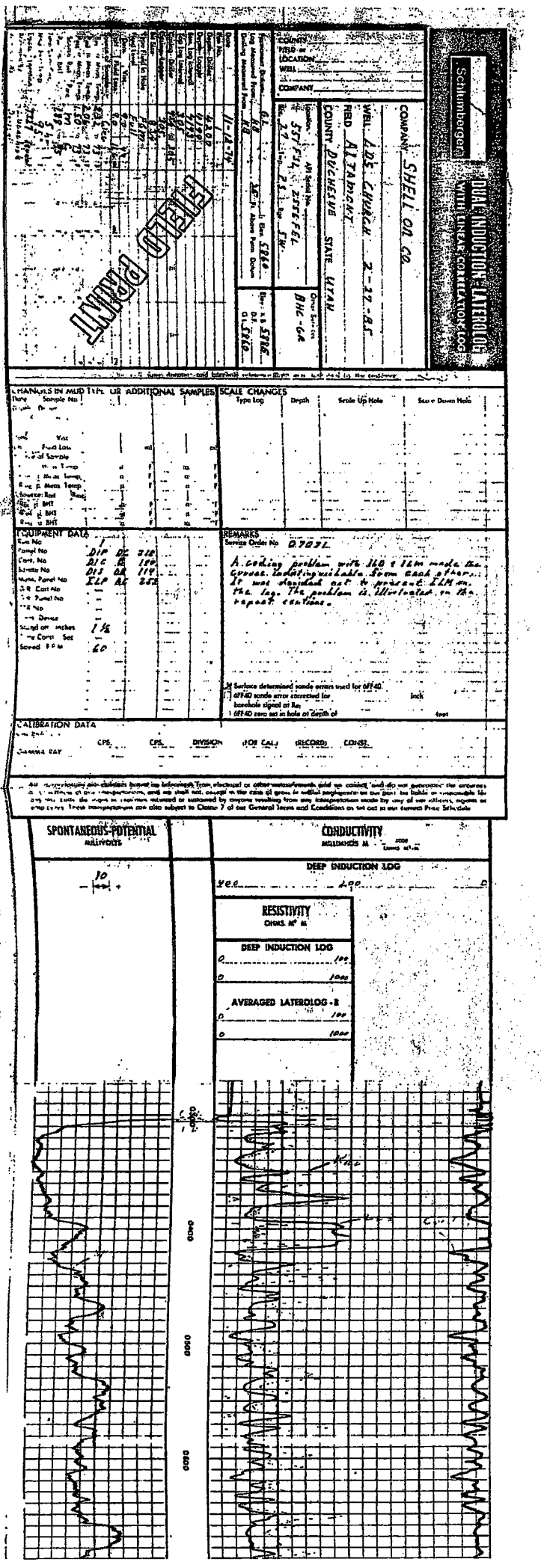
DO NOT WRITE BELOW DOUBLE LINE

RESULTS OF ANALYSIS

Turbidity		J.T.U.	Iron (total) as Fe		mg/l
Conductivity	[illegible]	micromhos/cm	Iron in filtered sample as Fe		mg/l
pH	7.70		Lead as Pb		mg/l
Total Dissolved Solids	18340	18,340	Magnesium as Mg		mg/l
Alkalinity(total)as $CaCO_3$	2790	mg/l	Manganese as Mn		mg/l
Aluminum as Al		mg/l	Mercury as Hg		mg/l
Arsenic as As		mg/l	Nitrate as N		mg/l
Barium as Ba		mg/l	Nitrite as N		mg/l
Bicarbonate as HCO_3	3500	mg/l	Phosphate as PO_4		mg/l
Boron as B		mg/l	Phenols as Phenol		mg/l
Cadmium as Cd		mg/l	Potassium as K		mg/l
Calcium as Ca		mg/l	Selenium as Se		mg/l
Carbonate as CO_3		mg/l	Silica as SiO_2		mg/l
Chloride as Cl	[illegible]	mg/l	Silver as Ag		mg/l
Chromium(hexavalent)as Cr		mg/l	Sodium as Na	9055	mg/l
Copper as Cu		mg/l	Sulfate as SO_4	220	mg/l
Cyanide as CN		mg/l	Surfactant as MBAS		mg/l
Fluoride as F		mg/l	Zinc as Zn	0.04	mg/l
Hardness(total) as $CaCO_3$	10	mg/l	Total Alpha		pci/l
Hydroxide as OH		mg/l	Total beta		pci/l
Ammonia N as NH_3					nci/l
					mg/l

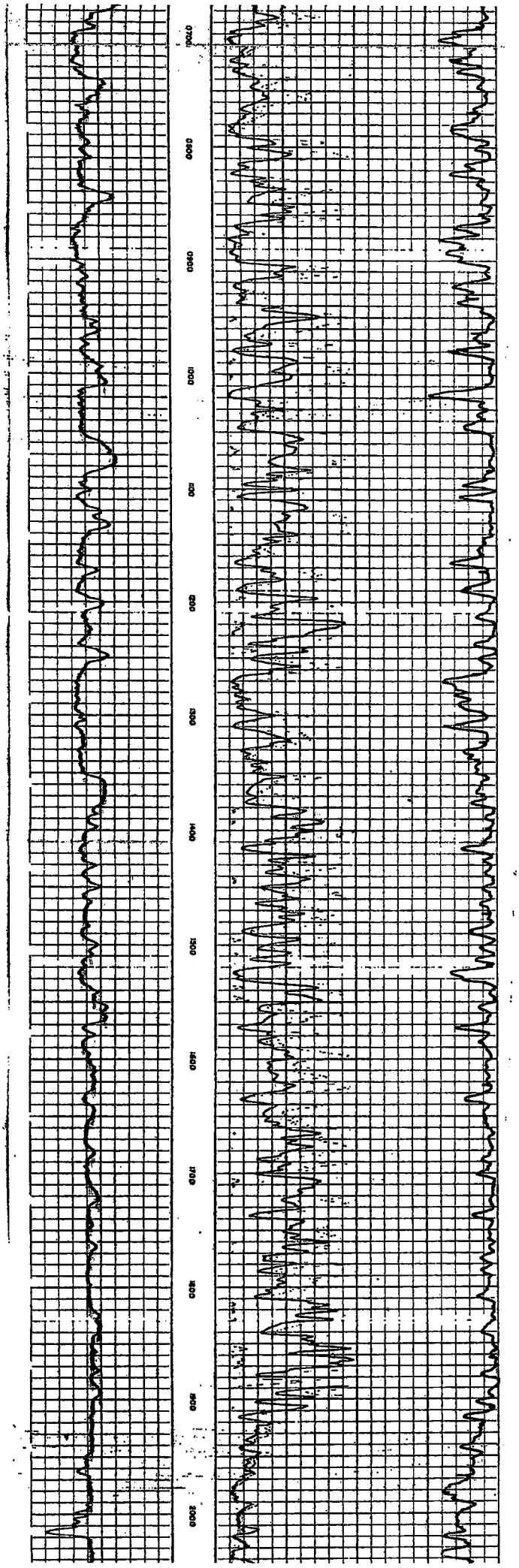
SDH-San-49-Rev. 4/73

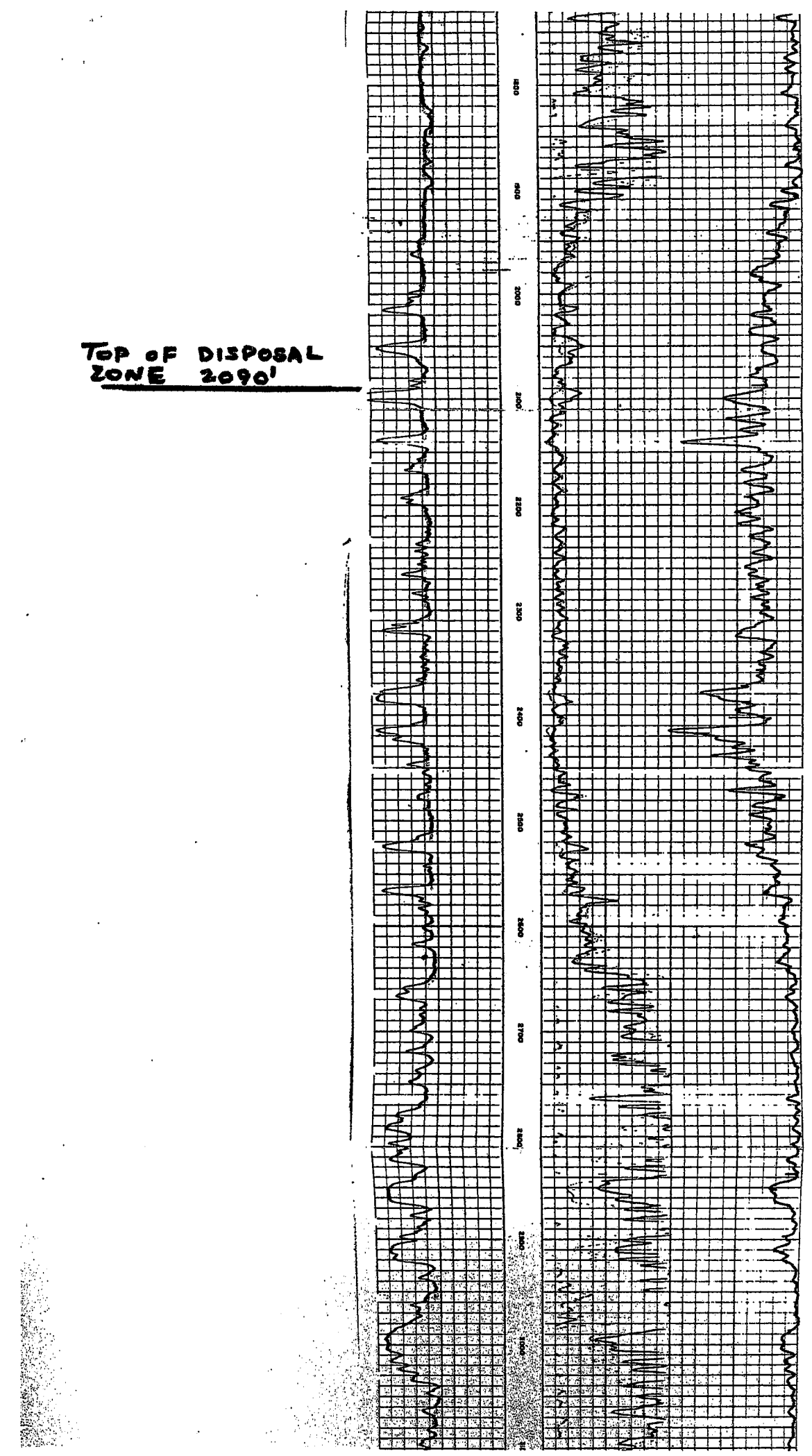
Exhibit C1

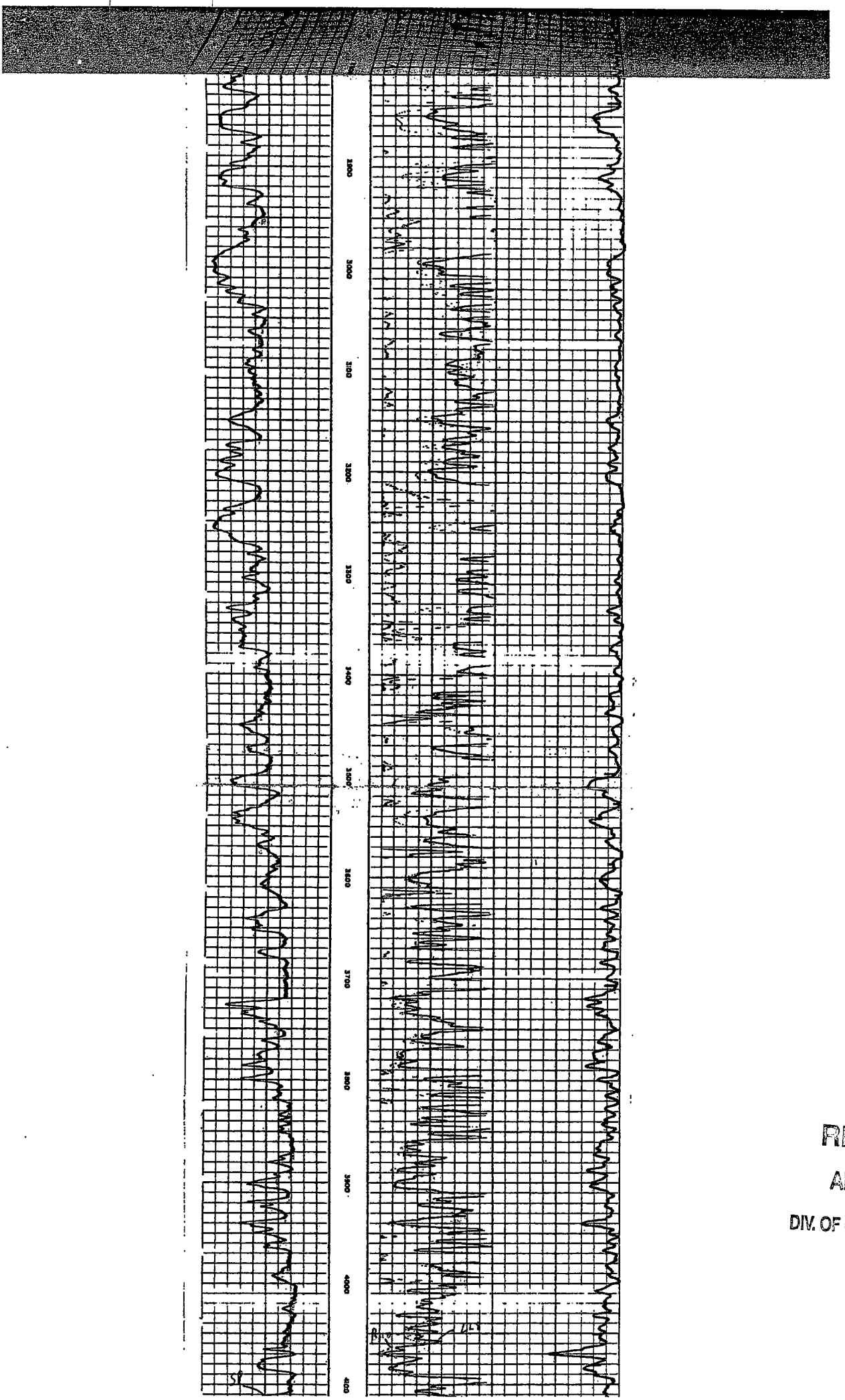


RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

Exhibit D







DETAIL LOG
5" 100'

SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms m²/m
10		DEEP INDUCTION LOG 2 1.0 10 100 mm mm
		LATEROLOG - 8 2 1.0 10 100 1000 2000

Form OGCC-3

RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

14 pf

STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other SWD Well

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR
Shell Oil Company

3. ADDRESS OF OPERATOR
1700 Broadway, Denver, Colorado 80202

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 551' FSL and 2556' FEL, Section 27
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.
Patented

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
L.D.S. Church

9. WELL NO.
2-27B5 SWD

10. FIELD AND POOL, OR WILDCAT
Altamont

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
SW/4 SE/4 Section 27-T2S-R5W, USB&M

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-013-30340	9/26/74	Duchesne	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
11/3/74	11/12/74	1/4/75	5887KB, 5860 GL	5862

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
4205	4075 (FC)	-	→	Total	-

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
2088-2860 (gross interval) Duchesne River-Uinta

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
BHCS, PDC, CBL

27. WAS WELL CORED
No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	40#	305'	12-1/4"	300 sx	0
7"	23#, 26#, 29#	4,205'	8-3/4"	1080 cu ft	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	2014'	2000'

31. PERFORATION RECORD (*Interval, size and number*)
2088-2098, 2129-2136, 2312-2317,
2370-2374, 2377-2383, 2407-2413,
2416-2419, 2515-2522, 2559-2561,
2817-2819, 2840-2860
(1 hole/ft w/Jumbo jets, 72 holes total)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
2817-2860	2200 gal 15% HCl
2312-2561	2300 gal 15% HCl
2088-2136	1700 gal 15% HCl

33.* PRODUCTION

DATE FIRST ~~PRODUCTION~~ inj	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
1/4/75	Injecting into SWD well	Injecting

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
1/26/75	24	-		-	-	3390	-

~~FLOW. TUBING~~ PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
250	-		-	-	3390	-

Inj

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
-

TEST WITNESSED BY
-

35. LIST OF ATTACHMENTS
Well History Report

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED T. S. Mize TITLE ~~Division Operations Engr.~~ DATE 1/29/75

:: USGS (for information)

(See Instructions and Spaces for Additional Data on Reverse Side)

Schlumberger

DUAL INDUCTION-LATEROLOG WITH LINEAR CORRELATION LOG

COUNTY ____
FIELD or LOCATION ____
WELL ____
COMPANY ____

Perfs.

COMPANY Husky Oil Company

WELL Russell 2-32 B4 swpw

FIELD Altamont

COUNTY Duchesne STATE Utah

Location 213 API Serial No. ____
1919' FNL 1317' FEL 8
Sec. 32 Twp. 2S Rge. 4W

Other Services:
BHC- GR

Permanent Datum: G.L. ; Elev.: 6134
Log Measured From K.B. , 11.8 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 6145.8
D.F. ____
G.L. 6134

Date	3/28/75			
Run No.	ONE			
Depth—Driller	4000			
Depth—Logger	3995			
Btm. Log Interval	3989			
Top Log Interval	284			
Casing—Driller	9 5/8 @ 285	@	@	@
Casing—Logger	284			
Bit Size	8 1/2			
Type Fluid in Hole	FGM			
Fluid Level	Full			
Dens. | Visc.	NA | 40			
pH | Fluid Loss	NA | NA ml	ml	ml	ml
Source of Sample	Flowline			
Rm @ Meas. Temp.	4.87 @ 61 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	4.78 @ 61 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | —			
Rm @ BHT	3.51 @ 83 °F	@ °F	@ °F	@ °F
Time Since Circ.	3.0 Hrs.			
Max. Rec. Temp.	83 °F	°F	°F	°F
Equip. | Location	5602 | 6nd Jct			
Recorded By	Geiser			

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

CHANGES IN MUD TYPE OR ADDITIONAL SAMPLES

Date | Sample No.		
Depth - Driller		
Type Fluid in Hole		
Dens. | Visc.		
pH | Fluid Loss	ml	ml
Source of Sample		
Rm @ Meas. Temp.	@ °F	@ °F
Rmf @ Meas. Temp.	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F
Source: Rmf | Rmc		
Rm @ BHT	@ °F	@ °F
Rmf @ BHT	@ °F	@ °F
Rmc @ BHT	@ °F	@ °F

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

EQUIPMENT DATA

Run No.	ONE			
Panel No.	DIP-DC-364			
Cart. No.	DIC-B-300			
Sonde No.	DIS-DB-253			
Mem. Panel No.	ILP-AC-235			
G.R. Cart No.	—			
G.R. Panel No.	—			
TR No.	—			
Cent. Device	USED			
Stand off - Inches	1 1/2"			
Time Const. - Sec.	—			
Speed - F.P.M.	—			

REMARKS

Service Order No. - 22452

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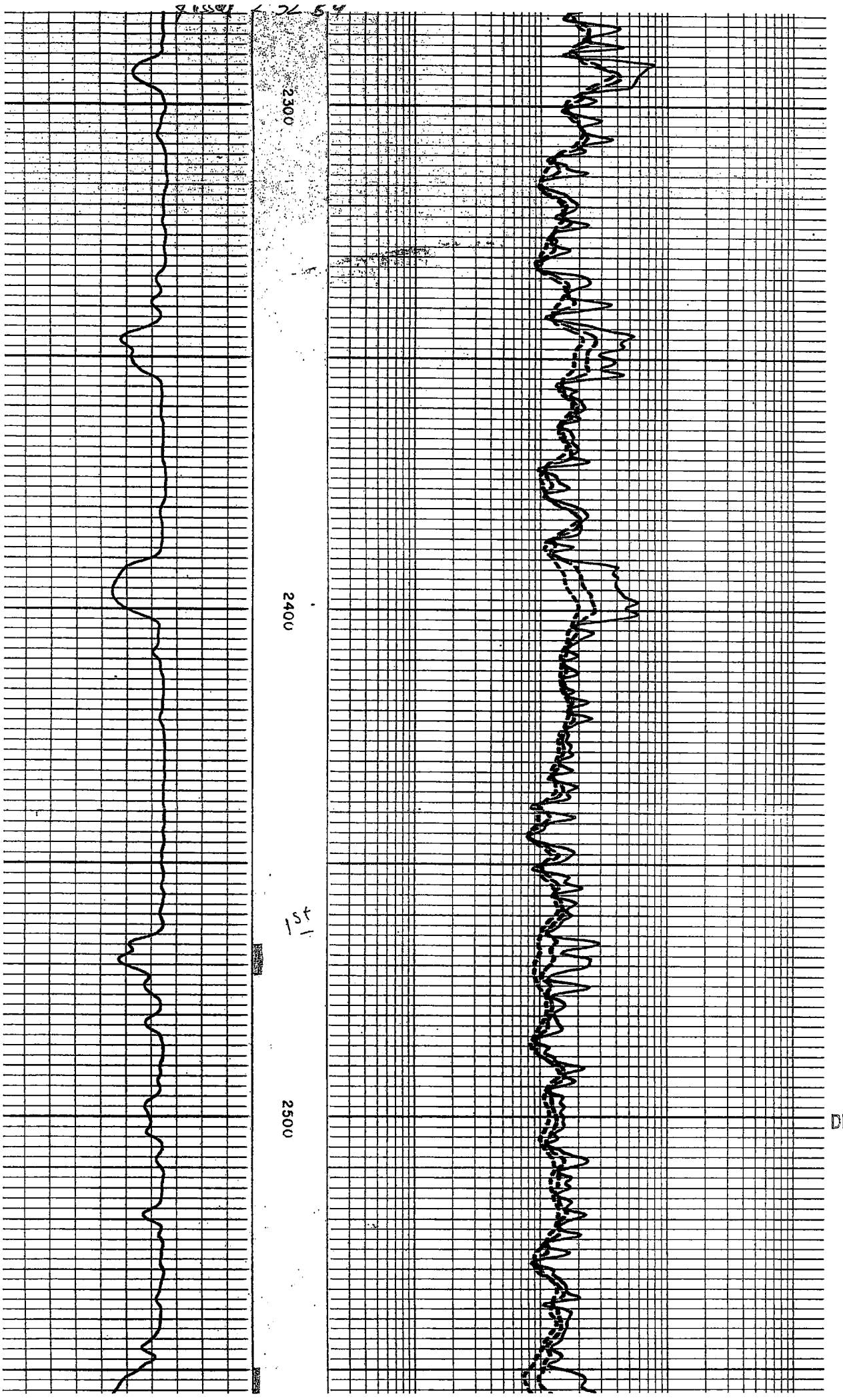
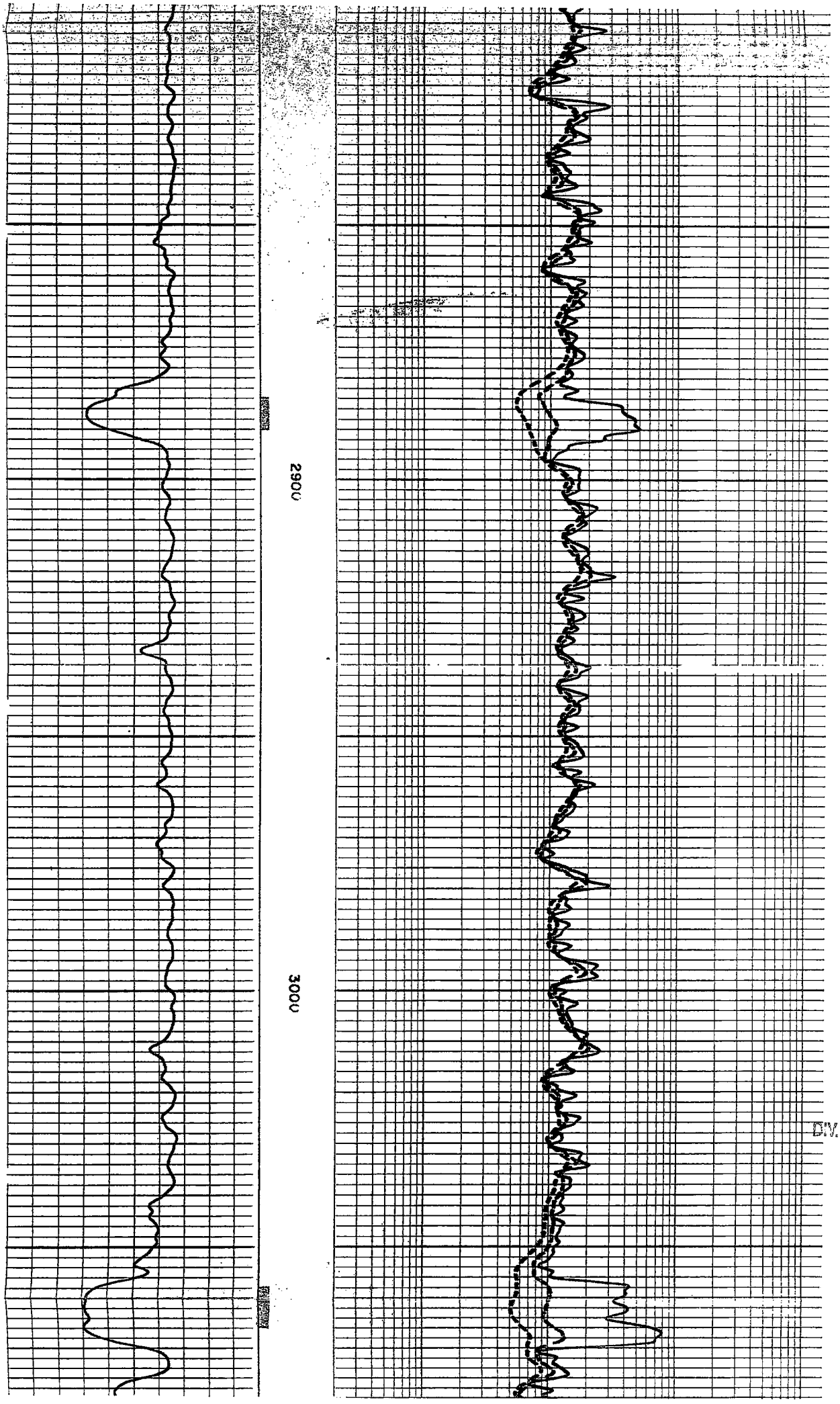
Exhibit D1

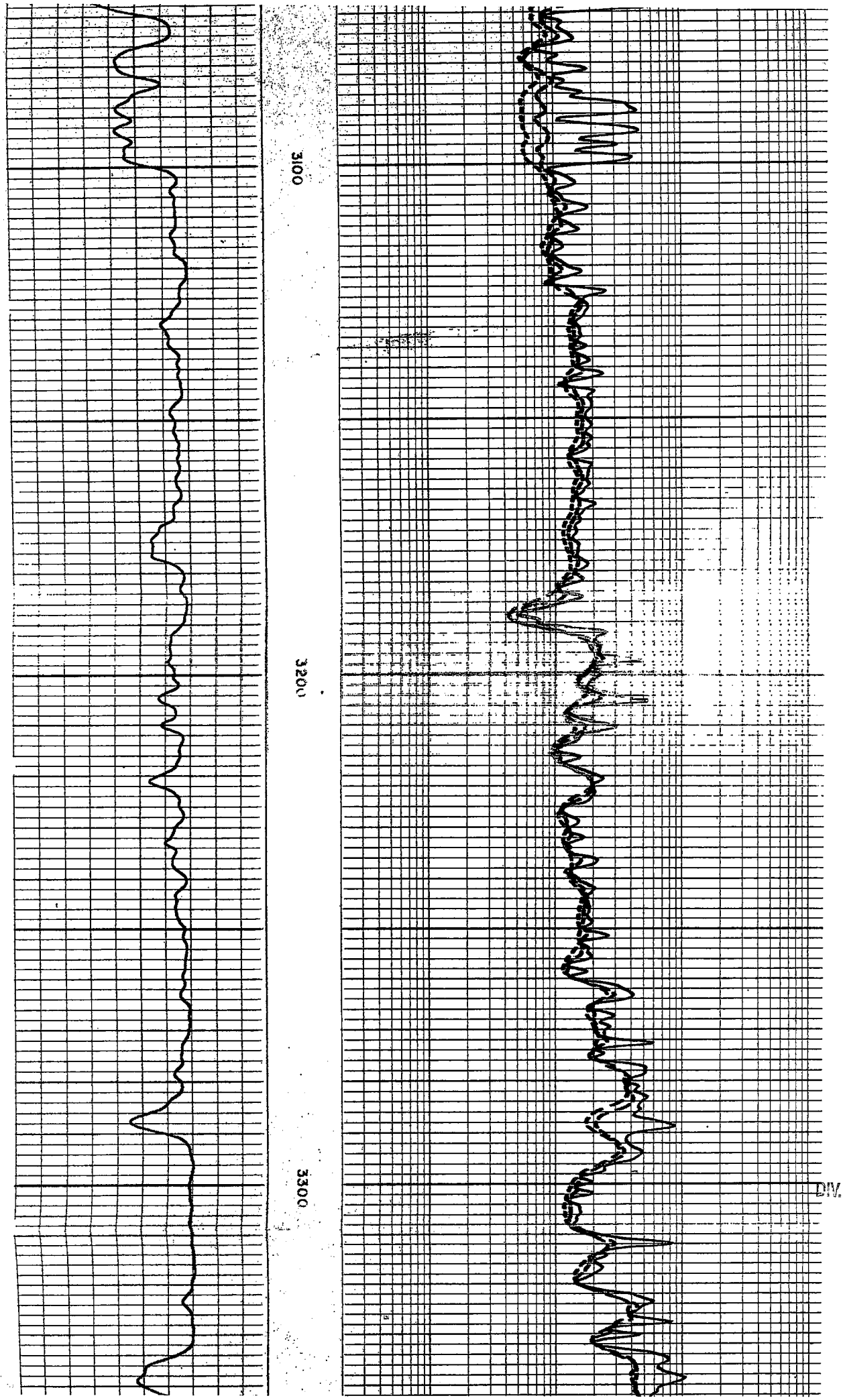
☑ Surface determined sonde errors used for 6FF40.
☐ 6FF40 sonde error corrected for ____ inch
borehole signal at Rm = ____
☐ 6FF40 zero set in hole at depth of ____ feet.

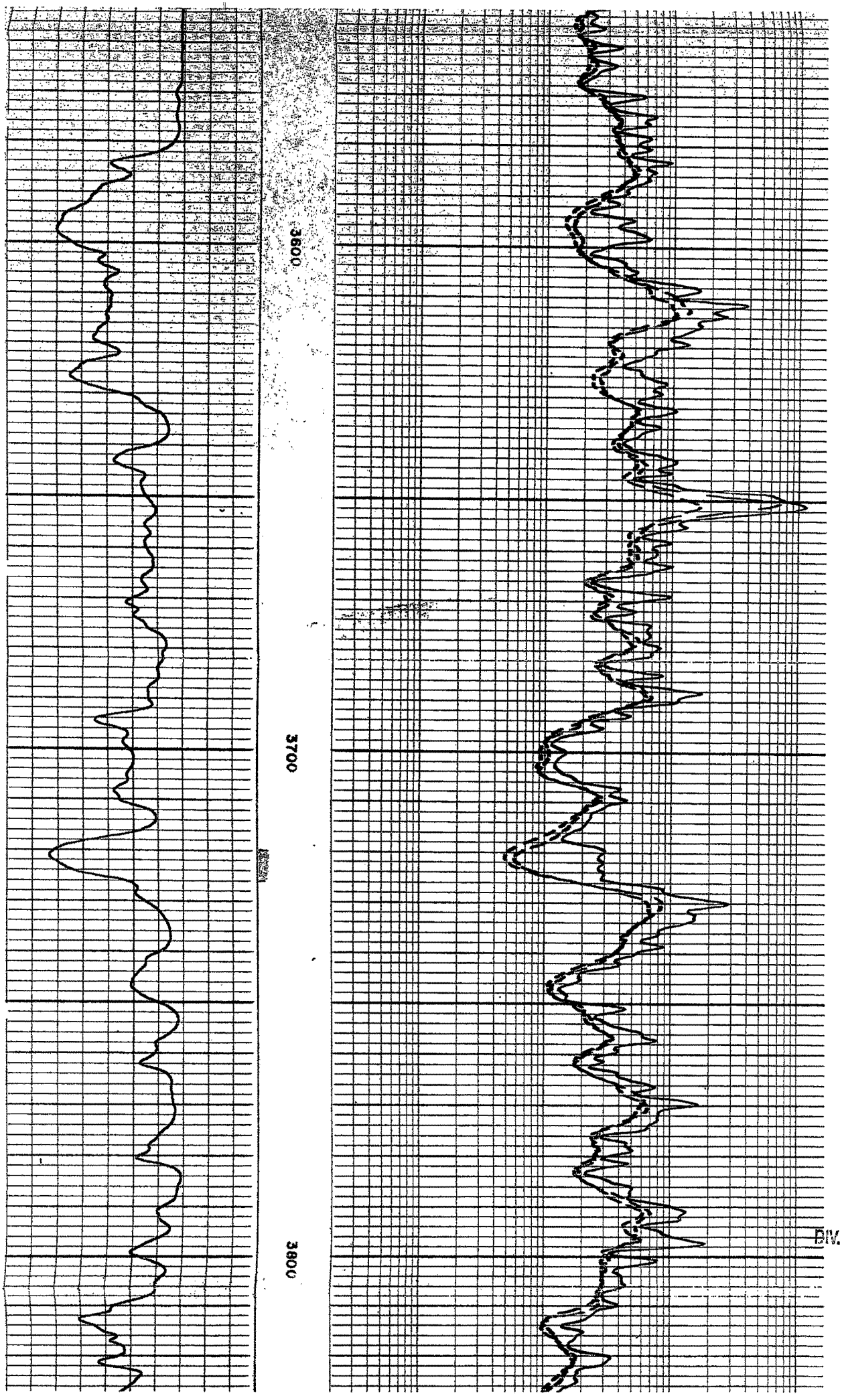
CALIBRATION DATA

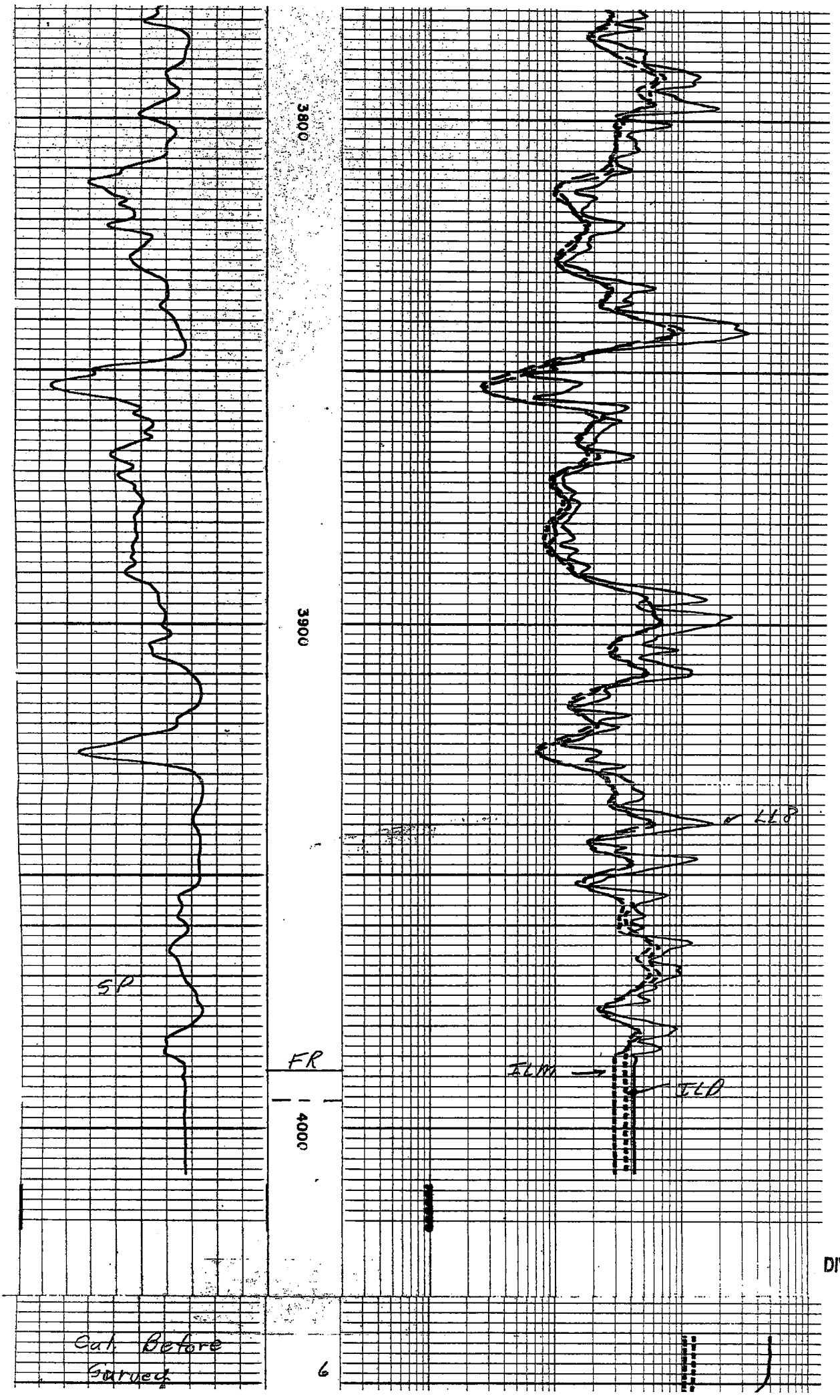
CALIBRATION:	BACKGND. CPS.	SOURCE CPS.	GALV. INCR. DIVISION	SENS. TAP (FOR CAL.)	SENS. TAP (RECORD)	TIME CONST.	
GAMMA RAY:							











Form OGCC-3

RECEIVED

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO. FEE

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME: Russell

9. WELL NO.: SWDW 2-32 B4

10. FIELD AND POOL, OR WILDCAT: Altamont

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Section 32 T2S, R4W

12. COUNTY OR PARISH: Duchesne

13. STATE: Utah

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other SWD Well

b. TYPE OF COMPLETION: NEW WELL XX WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR: Husky Oil Company of Delaware

3. ADDRESS OF OPERATOR: P. O. Box 380, Cody, Wyoming 82414

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*

At surface $S\frac{1}{2}$ NE (1919' FNL, 1317' FEL) Sec. 32, T2S, R4W

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
3-21-75	3-28-75	4-17-75	6145.8 KB, 6134 GL	6136

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
4000	3936		→	Total	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

2464-3720 (gross interval) Duchesne River - Uinta

25. WAS DIRECTIONAL SURVEY MADE: no

26. TYPE ELECTRIC AND OTHER LOGS RUN: GHC-GR, DIL, CBL

27. WAS WELL CORED: no

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	40#	380'	12-1/4"	175 sacks	0
5-1/2"	15.5#	3982'	8-1/2"	1305 sacks	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	2412'	2391'

31. PERFORATION RECORD (*Interval, size and number*)

2464-2470, 2548-2558,
2630-2638, 2884-2890,
3054-3062, 3720-3726
(2 holes/ft.)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	none

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
	injecting into SWD well	shut in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
4-17-75			→				

inj ~~FLOW. TUBING~~ PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
500 psig		→			3000 (est.)	

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

Well history report, Cement Bond logs

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED R. Warren Johnston TITLE Senior Engineer DATE 4-24-75

*(See Instructions and Spaces for Additional Data on Reverse Side)

Schlumberger

DUAL INDUCTION - SFL

DSI

COMPANY: LINMAR ENERGY CORPORATION

WELL: BROTHERSON 2-35B5

FIELD: ALTAMONT
COUNTY: DUCHESNE
STATE: UTAH
NATION: USA
LOCATION: SE / NE

SEC: 35 TWP: 2S RGE: 5W

PERMANENT DATUM: GL
ELEV. OF PERM. DATUM: 5817.0 F
LOG MEASURED FROM: KB
20.0 F ABOVE PERM. DATUM
DRLG. MEASURED FROM: KB

ELEVATIONS-
KB: 5837.0 F
DF: 5836.0 F
GL: 5817.0 F

DATE: 14 APR 84
RUN NO: 1

DEPTH-DRILLER: 10020.0 F
DEPTH-LOGGER: 9997.0 F
BTM. LOG INTERVAL: 9988.0 F
TOP LOG INTERVAL: 2511.0 F

CASING-DRILLER: 2508 F
CASING-LOGGER: 2511 F
CASING: 9.625

BIT SIZE: 8.75

OTHER SERVICES-
FDC
CNL
CYBERLOOK

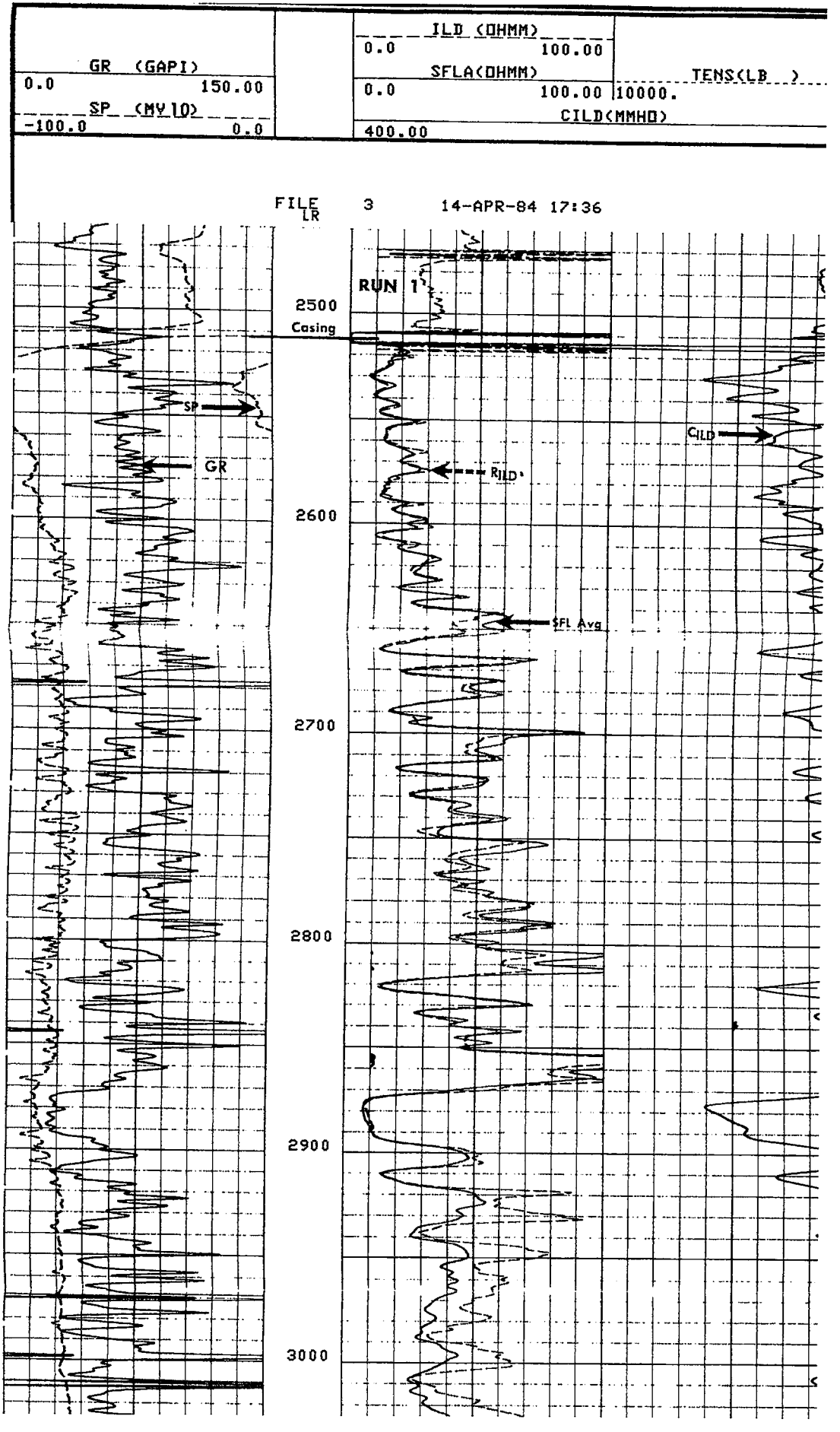
PROGRAM
TAPE NO:
26.2
SERVICE
ORDER NO:
267137

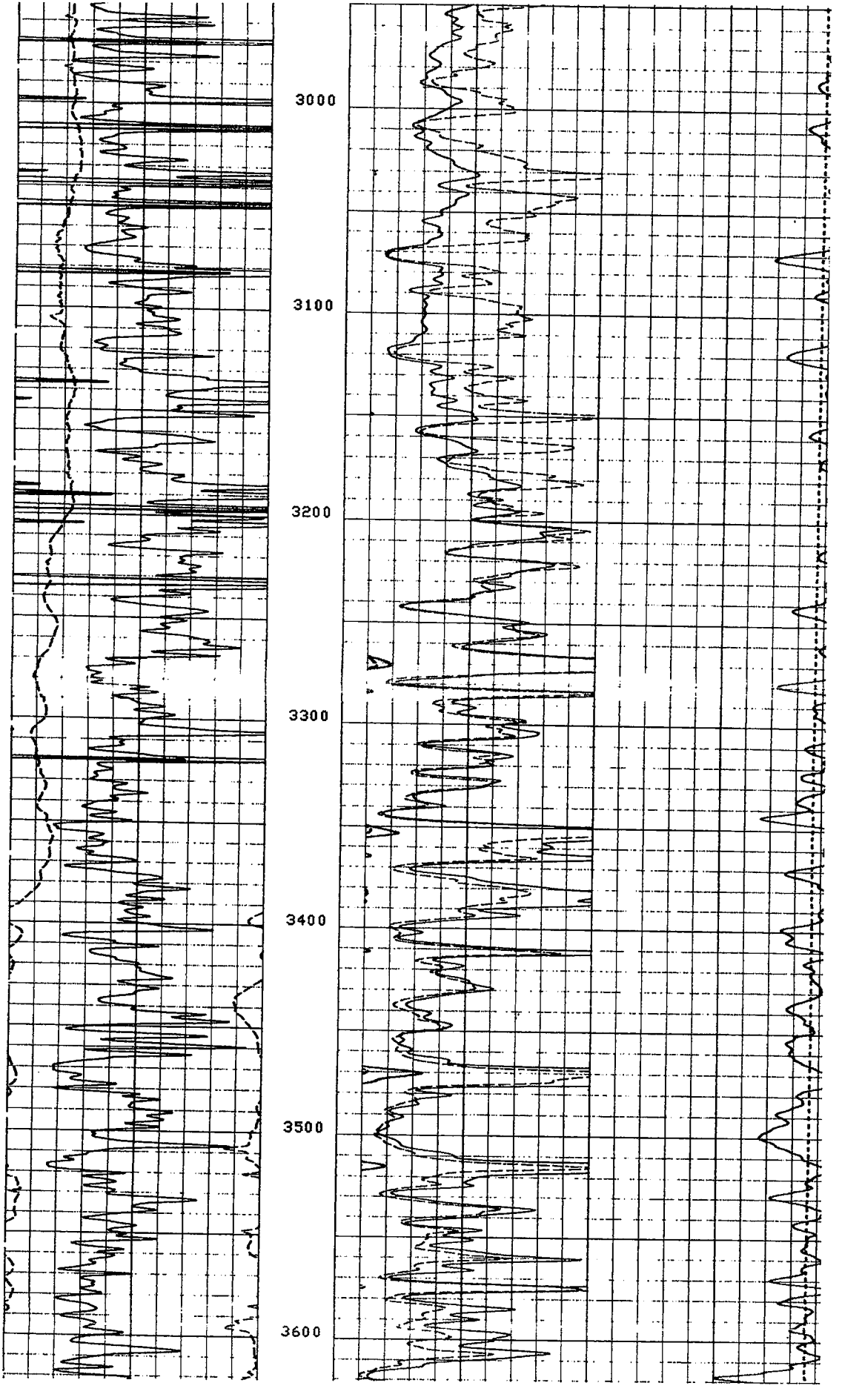
RUN 1

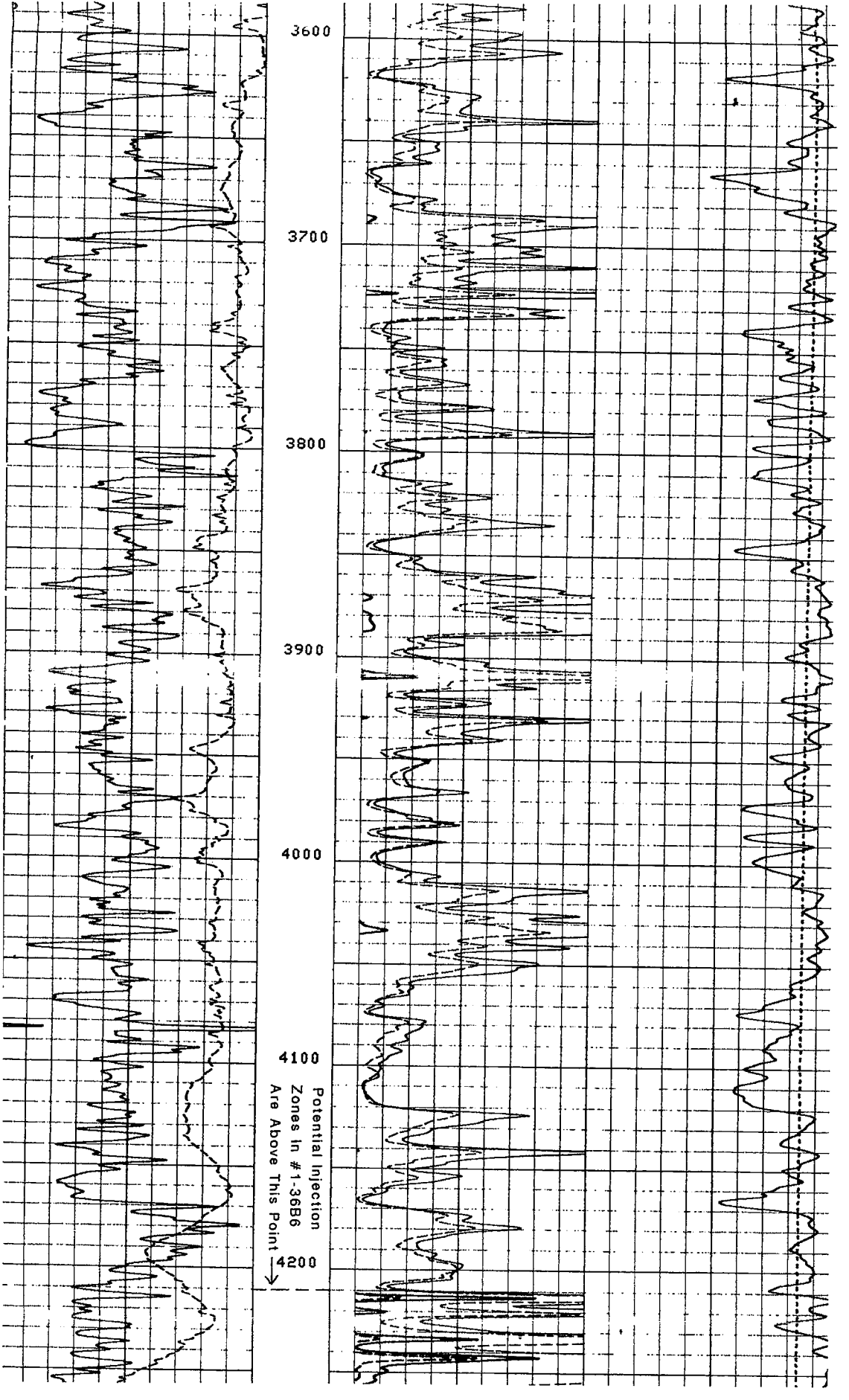
TYPE FLUID IN HOLE:	GEL-YP
DENSITY:	10.2 LB/G
VISCOSITY:	39.0 S
PH:	10.5
FLUID LOSS:	16.0 C3
SOURCE OF SAMPLE:	MUD TANK
RM:	.660 OHMM AT 70.0 DEGF
RMF:	.440 OHMM AT 70.0 DEGF
RMC:	.990 OHMM AT 70.0 DEGF
SOURCE RMF/RMC:	MEAS/CALC
RM AT BHT:	.260 OHMM AT 188. DEGF
RMF AT BHT:	.173 OHMM AT 188. DEGF
RMC AT BHT:	.390 OHMM AT 188. DEGF
TIME CIRC. STOPPED:	0900 4/14
TIME LOGGER ON BTM.:	1445 4 /14
MAX. REC. TEMP:	188.0 DEGF
LOGGING UNIT NO:	8305
LOGGING UNIT LOC:	VERNAL
RECORDED BY:	T. TEIPNER K. FOX
WITNESSED BY:	JIM GARCIA

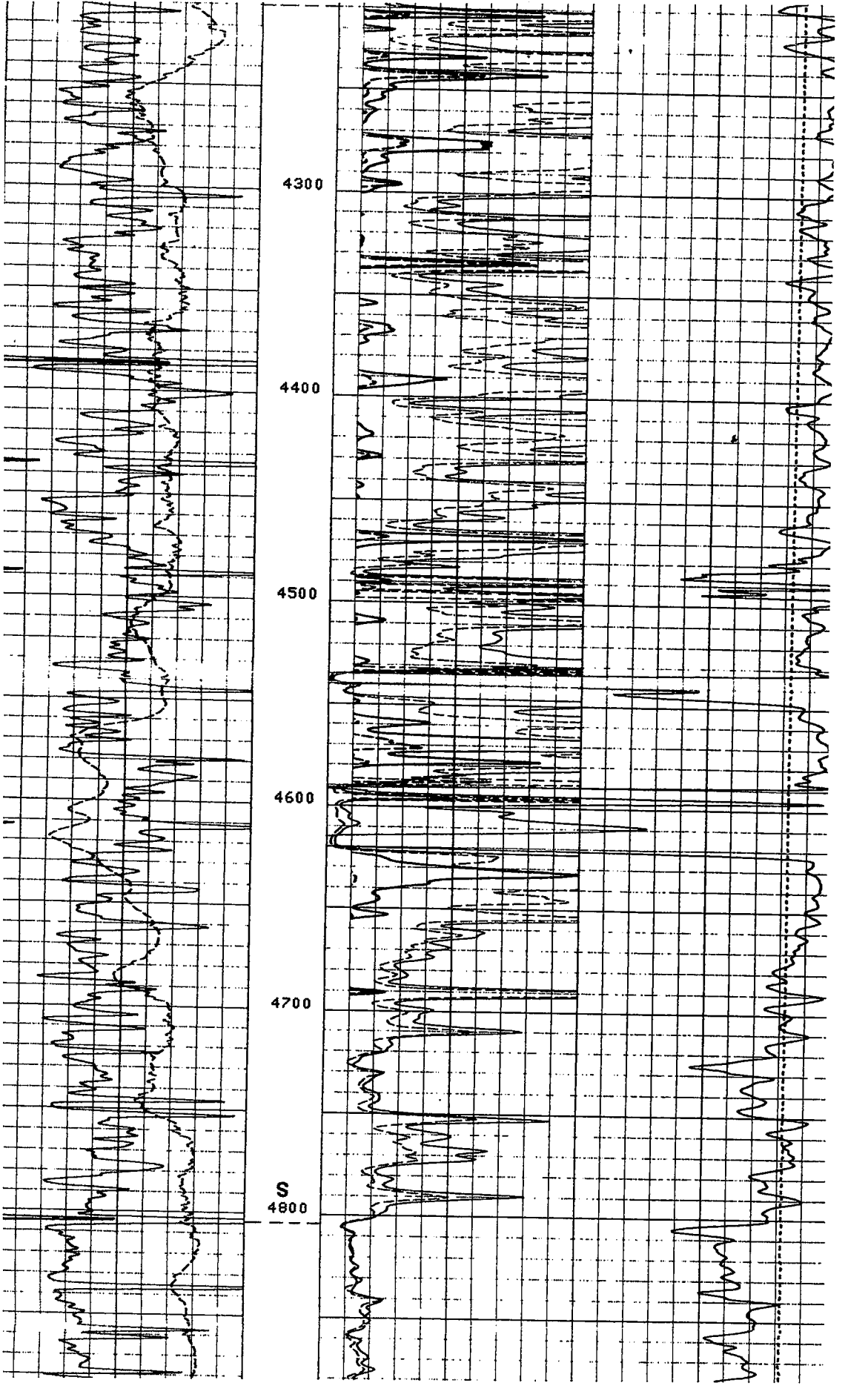
-Exhibit D2-

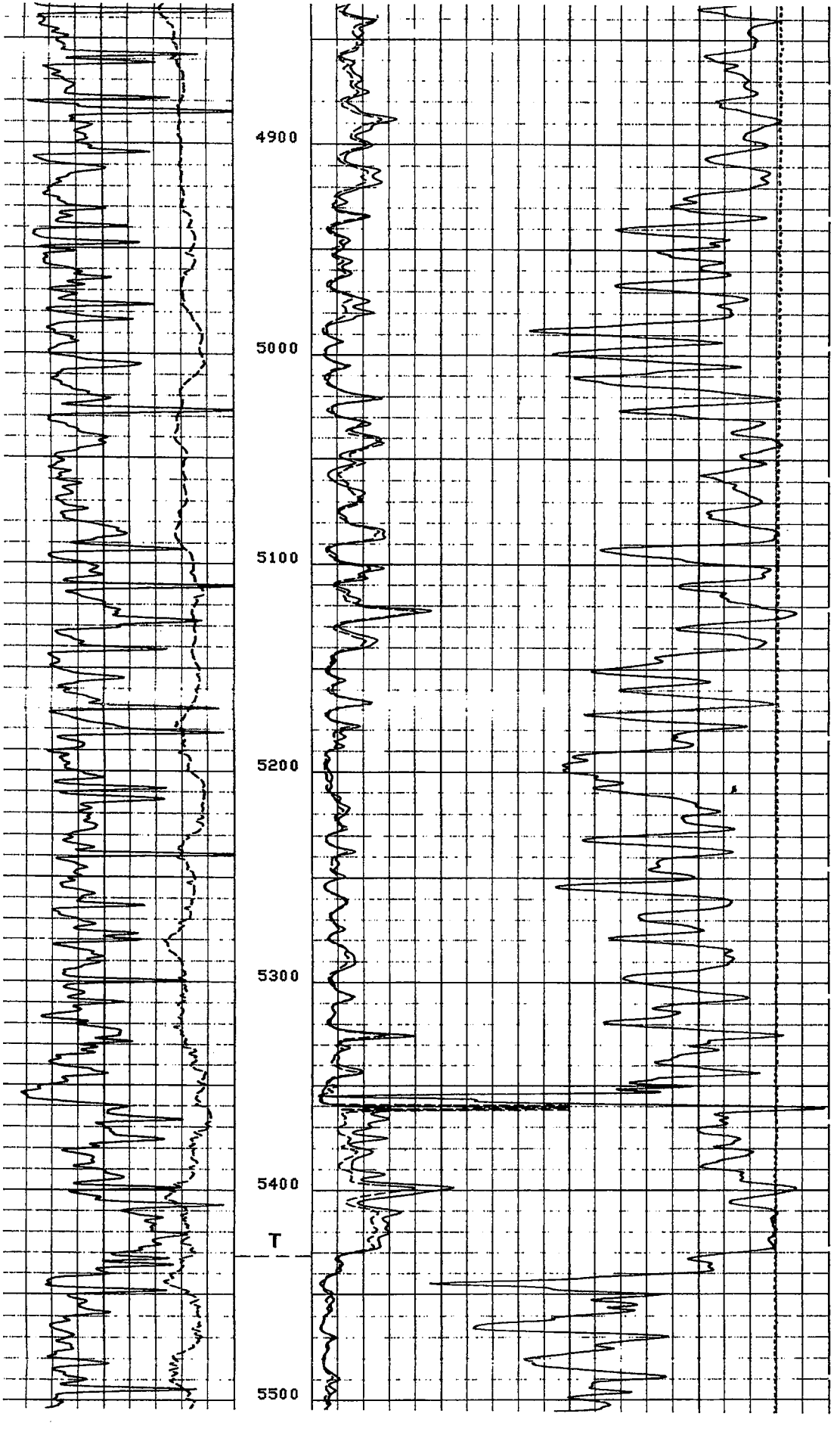
REMARKS:











SWD CONVERSION PROCEDURE
Revision #1
June 12, 1997

RHOADES-MOON #1-36B5

Section 36-T2S-R5W
Altamont Field
Duchesne County, Utah

WELL DATA

Location: 1178' FEL, 1178' FNL
Elevation: 6077' GL; 6105' KB
Total Depth: 12,100' PBTD: 9390' (RBP)
Casing: 13-3/8" 48# H-40 @ 315' KB cmt'd to surf w/ 300 sks
9-5/8" 40# J-55(103 jts) and N-80 (38 jts) @ 5799' KB cmt'd w/ 600sks
7" 26# S-95 (64 jts) & N-80 (186 jts) @ 10,198' KB cmt'd w/ 380 sks
DV collar @ 8148' cmt'd w/ 590 sks.
5" 18# N-80 from 9,872' to 12,092' cmt'd w/ 210 sks

Tubing: 2-7/8" N-80 EUE 8 rd @ 8905' open ended.

TUBULAR DATA

Description	ID	Drift	Capacity (BPF)	Burst (PSI)	Collapse (PSI)
9-5/8" 40# J-55	8.835"	8.679"	.0773	3950	2570
9-5/8" 40# N-80	8.835"	8.679"	.0773	5750	3090
7" 26# S-95	6.276"	6.151"	.0382	8600	5870
7" 26# N-80	6.276"	6.151"	.0382	7240	5410
5" 18# N-80	4.276"	4.151"	.0177	10140	10490

WELL HISTORY

6/74 Initial completion. Perforate from 10,669' to 11,691', 2 SPF, 164 holes. Acidize w/ 20,000 gals 15% HCl. Prod 50 BOPD, 250 MCFPD, 125 BWPD.

4/76 Added perforations 10,214' to 11,548'. 374 holes. Acidize with 20,000 gals 7-1/2% HCl.
Prior Production: 15 BOPD, 60 MCFPD, 5 BWPD
Post Production: 75 BOPD, 225 MCFPD, 35 BWPD

2/81 Acidized w/ 10,000 gals 15% HCl
Prior Production: 15 BOPD, 60 MCFPD, 5 BWPD
Post Production: 25 BOPD, 75 MCFPD, 20 BWPD

Form OGCC-3

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16

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: FEE

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Rhoades

9. WELL NO.: 1-36

10. FIELD AND POOL, OR WILDCAT: Altamont

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: 36 T2S-R5W

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: HUSKY OIL COMPANY OF DELAWARE

3. ADDRESS OF OPERATOR: P. O. Box 380, Cody, Wyoming 82414

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 1178' FEL, 1178' FNL Sec 36, T2S, R5W
At top prod. interval reported below: Same
At total depth: Same

14. PERMIT NO. / DATE ISSUED

12. COUNTY OR PARISH: Duchesne

13. STATE: Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
3-16-74	5-22-74	7-4-74	6077 Gr. Ungraded	6077

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12095	11990		→		

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
11686-691, 11652-657, 11454-459, 11120-125, 10782-789, Wasatch
11662-673, 11616-621, 11175-179, 10854-870, 10756-765, 10669-679

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN: DUL. IND. LL-GR. BHCS-GR. FDC-CNL-GR.

27. WAS WELL CORED: NO

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8	48#	315 K.B.	17-1/2 "	300 sks class G 3% $CaCl_2$	
9-5/8	40#	5612 K.B.	12-1/4"	400 sks lite 200sks class G	
7	26#	10200 K.B.	8-1/2"	180 sks lite 200sks class G	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
5"	9872	12092	210 sks	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8	9772	9755
1-1/2	5026.56	

31. PERFORATION RECORD (*Interval, size and number*)
11686-691, 11454-459, 10756-765
11662-673, 11175-179, 10669-679
11652-657, 11120-125, 2 jet shots per ft.
11616-621, 10854-870
10782-789

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
All Perfs	20,000 Gal 15% HCL
	6,000# Unibeads
	600# Buttons
	264 Balls

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
6-12-74	Flowing	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
7-4-74	24	16/64		106	379	43	3575 SCF/BBL

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
300 PSIG			37	260	127	

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented (connection to gas plant)

TEST WITNESSED BY: Glynn Mayson

35. LIST OF ATTACHMENTS

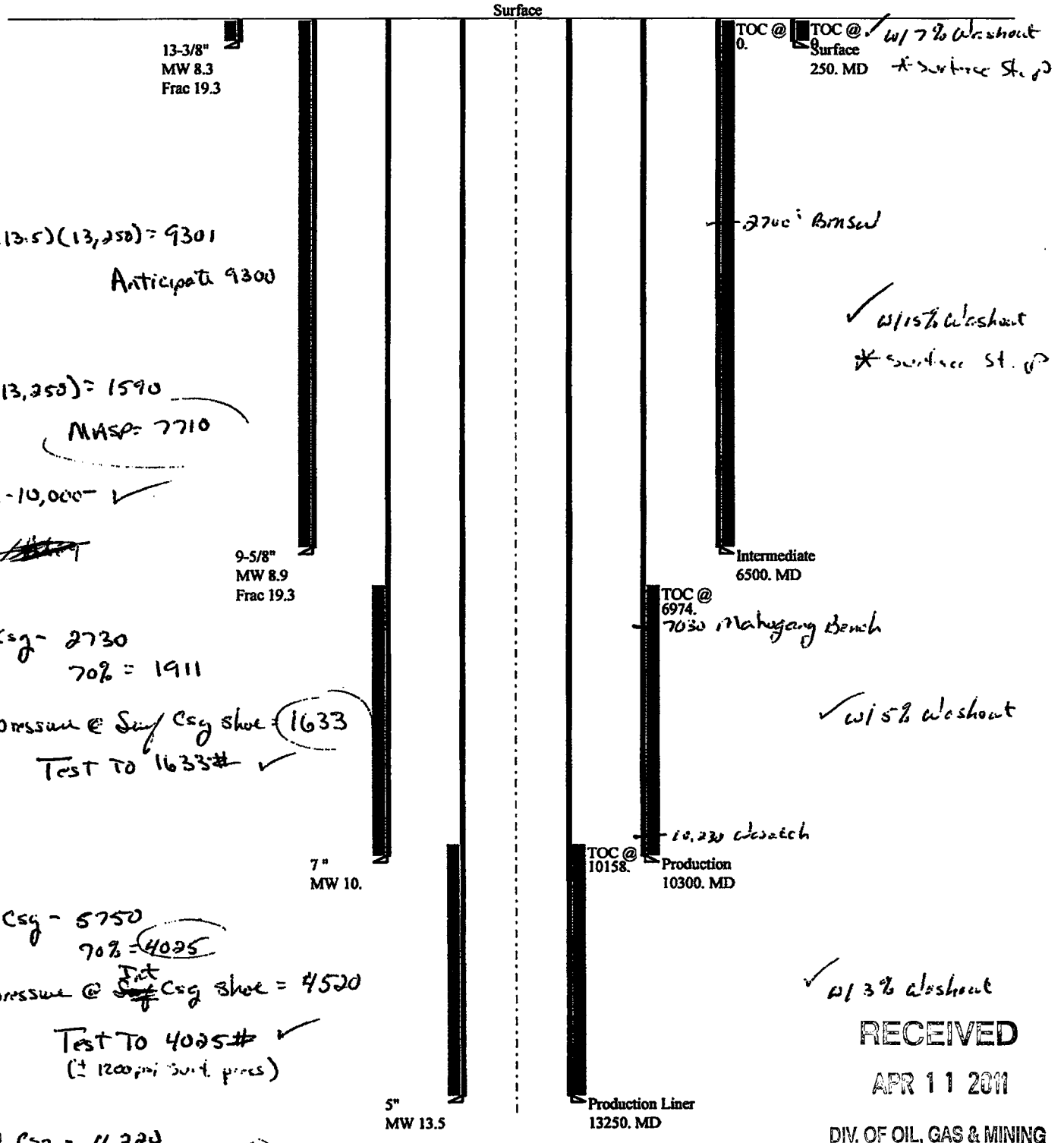
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Joel C Hargo TITLE PRODUCTION ENGINEER DATE 7-8-74

*(See Instructions and Spaces for Additional Data on Reverse Side)

04-06 El Paso Katherine 3-. /B4

Casing Schematic



BHP

(.052)(13.5)(13,250) = 9301

Anticipate 9300

Gas

(.12)(13,250) = 1590

MASP = 7710

BOPE - 10,000 ✓

~~Annular~~

Surf Csg - 2730

70% = 1911

Max pressure @ Surf csg shoe = 1633

Test to 1633# ✓

Int Csg - 5750

70% = 4025

Max pressure @ Int Csg shoe = 4520

Test To 4025# ✓

(± 1200 psi surf. press)

Prod Csg - 11,220

70% = 7854

Max pressure @ prod csg shoe = 8651

Test To 7854# ✓

(± 5400 psi surface press)

✓ Adequate Dwg 4/6/11

RECEIVED

APR 11 2011

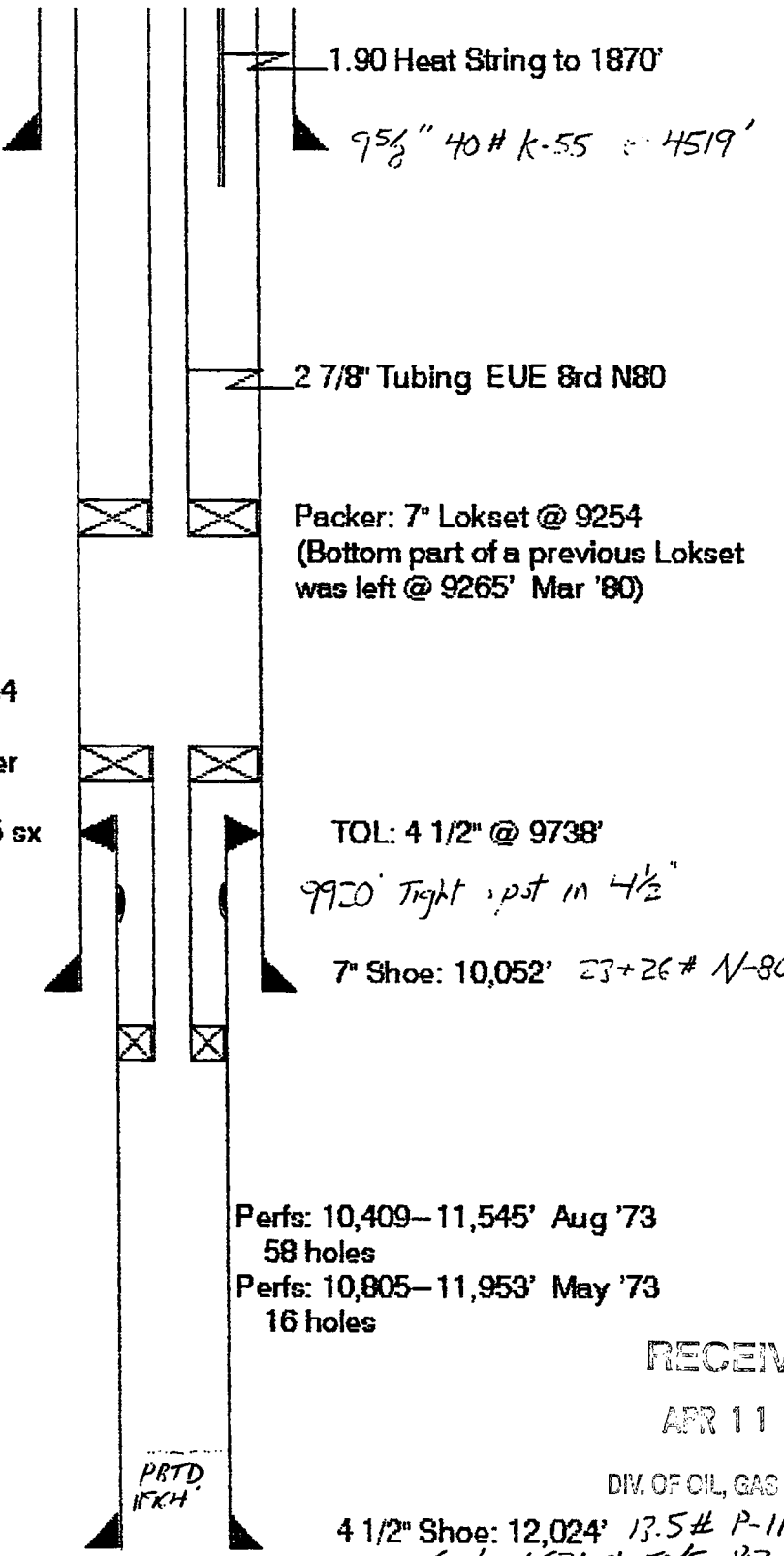
DIV. OF OIL, GAS & MINING

Exhibit E

T.D.E.

CHRISTMAN BLANN 1–31B4

Sec 31; 2S; 4W



Average Production:
19 ~~25~~ BOPD
15) ~~125~~ BWPD
~~85~~ MCFD

Downhole Pump:
Jet

Surface Equipment:
J100 belt drive

Comments:
SWD line to L. Russel 2–32B4

2 7/8" Scab Liner
9399–10,350'
Cemented w/45 sx

Cmt w/621 sx 50/50 Poz

Exhibit E1

RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

31–Aug–94

BEFORE THE DOGM in and for the STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF IWM SEEKING
FOR ADMINISTRATIVE APPROVAL,
PURSUANT TO RULE C-11, AUTHORIZING THE DRILLING
OF AN INJECTION WELL AND THE UNDERGROUND DISPOSAL OF
WATER PRODUCED AS A BY PRODUCT OF OIL AND GAS
PRODUCTION

CERTIFICATE of MAILING

State of Utah
County of Duchesne

Robert L. Ballou, Agent for applicant, Integrated Water Management, deposes and affirms that on April 8th 2011 he caused to be deposited in the US mail, copies of the application as directed by the DOGM for the above entitled matter to the list referred to as Exhibit "F", and that the addresses given in that exhibit are correct to the best of the affiant's information and belief; such exhibit includes all lease holders, offset operators and surface owners within a 1/2 mile radius of the proposed SWD described in the application.

Robert L. Ballou PG -Consultant

Subscribed and sworn to before me this 8th day of April 2011.

My commission expires: 10-18-13

Notary Public
DAVID K HIGGINSON
Commission #580427
My Commission Expires
October 18, 2013
State of Utah

RECEIVED
APR 11 2011
DIV. OF OIL, GAS & MINING

IWM SWD 3-30 B4

Exhibit F

Operator/Landowner Section 29	Duchesne Co. Serial #	Address	Date Sent	Comments
Brent Farnsworth	2146	PO Box 153 Duchesne, UT 84021		Only Neighbor in vicinity, IWM purchased 9 additonal nine acres from Brent and he constructed the fence around our facility.
Section 30 & 31				
William A. Robinson	2147-2-1	243 E. Escondido Blvd # 518 Escondido CA 92025		
J. Christman	2151	146 Avenida Coto San Clemente, CA 92672		
Jerry A. Craysper and Joann Craysper	2148-2	840 E. House Mtn. Drive Cottonwood, AZ 86326		
Heidi Kennelly	2148-2-1	PO Box 2074 Mesquite, NV 89024		
Jose Luis Tomayo	2150	4200 Dennis Dr. SLC, UT 84120		
Antonio Gandera Jr. Trustee, Victoria Bell Gandera Trustee, SJ Christman Trustees	2157	14808 E. Sabine Dr. La Mirada, CA 90638		
Ronnie W. Case, Cristine Case	2152	PO Box 70161 SLC, UT 84170		
Duchesne /Wasatch Blue Bench Landfill	2158	Duchesne Co. Landfill C/O Manager P.O. Box 228 Duchesne, UT 84021		
Section 32				
Lois Bleazard Trustee	96792	PO Box 510033 Mountain Home, UT 84051		
Duchesne /Wasatch Blue Bench Landfill	2158	Duchesne Co. Landfill C/O Manager P.O. Box 228 Duchesne, UT 84021		
El Paso Exploration and Production		El Paso Exploration and Production Attention: Jordan Nelson Senior Production Engineer 1099 18th Street, Suite 1900 Denver, CO 80202		Operator in Sections 29, 30,31, 32 2S 4W

CONFIDENTIAL

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER SWD

8. WELL NAME and NUMBER: IWM SWD 3-30 B4

2. NAME OF OPERATOR: Integrated Water Management

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER: (435) 454-4646

10. FIELD AND POOL, OR WILDCAT:

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 300' FSL 800' FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 2S 4W

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 6/17/2011	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Spud @ 17:30 on June 17, 2011, drill surface hole and set 500' of 36# M-50, cement to surface, cut casing and installed well head. Currently drilling with 8-3/4" PDC, to reach TD of 5500'

NAME (PLEASE PRINT) Robert Ballou TITLE Geologist/Agent

SIGNATURE Robert Ballou DATE 6/21/2011

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals

1 TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER SWD

2. NAME OF OPERATOR: Integrated Water Management

3 ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER: (435) 454-4646

4 LOCATION OF WELL

FOOTAGES AT SURFACE: 800 feet from east line 300 feet from south line

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 2 S 4 W

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7 UNIT or CA AGREEMENT NAME:

8. WELL NAME and NUMBER: IWM SWD 3-30 B4

9 API NUMBER: 4301350753

10. FIELD AND POOL, OR WILDCAT:

COUNTY: Duchesne

STATE: UTAH

11 CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☒ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☑ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
Date of work completion:	☐ CHANGE WELL NAME	☐ PLUG BACK	☑ WATER DISPOSAL
	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12 DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

IWM intends to perforate gross zones from 4963' to 5130', a total of 180' of gross interval.

The perforations will be 4 shots per foot. This action is in preparation for establishing operations up as a SWD well. All perforations in the Tu fm.

COPY SENT TO OPERATOR
Date: JUL 11 2011
Initials: KS

Accepted by the Utah Division of Oil, Gas and Mining
Date: 07-07-11
By:

NAME (PLEASE PRINT) Robert Ballou TITLE Geologist/Agent

SIGNATURE Robert Ballou DATE 7/6/2011

(This space for State use only)

RECEIVED
JUL 06 2011
DIV. OF OIL, GAS & MINING

(5/2000)

(See Instructions on Reverse Side)

FORM 6

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM

Operator: Integrated Water Management
Operator Account Number: N 3685
Address: PO Box 430
city Altamont
state UT zip 84066
Phone Number: (435) 454-4646

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301350753	IWM SWD 3-30B4		SESE	30	2S	4W	Duchesne
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18109	6/18/2011			7/20/11	
Comments: GRRV						CONFIDENTIAL	

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
Comments:							

ACTION CODES:
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Robert Ballou
Name (Please Print)

Signature
Agent
Title
7/1/2011
Date

RECEIVED
JUL 11 2011
DIV. OF OIL, GAS & MINING

(5/2000)

Duchesne County Planning, Zoning
& Community Development
734 North Center Street
P.O. Box 317
Duchesne, Utah 84021
(435) 738-1152
Fax (435) 738-5522

July 15, 2011

Mr. Brad Hill, Permitting Manager
Division of Oil, Gas and Mining
PO Box 145801
Salt Lake City, UT 84114-5801

RE: Integrated Water Management Injection Well (Cause No UIC-378.1)

Dear Mr. Hill:

We are in receipt of your notice regarding Integrated Water Management's request to operate a Class II salt water injection well at their facility located at 20250 W 2000 South, near the Blue Bench landfill, in Duchesne County.

Duchesne County is supportive of this request and recommends approval under conditions that your agency deems appropriate. The county has been receiving odor complaints recently due to operations at this facility and hopes that injection will eliminate the odor problem. We hope that this authorization can be granted as expeditiously as possible.

Thank you for the opportunity to comment.

Sincerely,

Mike Hyde, AICP
Community Development Administrator

pc: Integrated Water Management, PO Box 430, Altamont, UT 84001-0430
Bob Ballou, Ballou Geologic Consulting, PO Box 816, Roosevelt, UT 84066

P:\Mike\DOGM Correspondence\Integrated Water Management Injection.doc

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

October 26, 2011

Integrated Water Management, LLC
P.O. Box 430
Altamont, UT 84001

Subject: Integrated Water Management Facility Well: IWM SWD 3-30 B4, Section 30, Township 2 South, Range 4 West, USM, Duchesne County, Utah, API Well # 43-013-50753

Gentlemen:

Pursuant to Utah Admin. Code R649-5-3-3, the Division of Oil, Gas and Mining (the "Division") issues its administrative approval for conversion of the referenced well to a Class II injection well. Accordingly, the following stipulations shall apply for full compliance with this approval:

1. Compliance with all applicable requirements for the operation, maintenance and reporting for Underground Injection Control ("UIC") Class II injection wells pursuant to Utah Admin. Code R649-1 et seq.

2. Conformance with all conditions and requirements of the complete application submitted by Integrated Water Management.

3. A casing\tubing pressure test shall be conducted prior to commencing injection.

4. Pressure shall be monitored between the surface casing and the production casing on a regular basis. Any pressure changes observed shall be reported to the Division immediately.

A final approval to commence injection will be issued upon satisfactory completion of the listed stipulations. If you have any questions regarding this approval or the necessary requirements, please contact Ammon McDonald 801-538-5337 or Brad Hill at 801-538-5315.

Sincerely,

John Rogers
Associate Director

JR/AM/js
cc: Bruce Suchomel, Environmental Protection Agency
Duchesne County
Well File
N:\O&G Permits\Injection Permits\Integrated Water Mng

November 1, 2011

To:

DOGM

Re: Monitoring of Chrisman Blann 1-31B4 well.

Please be advised that Integrated Water Management has permission to monitor the casing pressure on the Chrisman Blann 1-31 B4 well as outlined by personnel (Dennis Ingram) of the DOGM.

Thank you,

Gary L Lamb

Gary Lamb

El Paso Production Supervisor

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

TEMPORARY 90-DAY
UNDERGROUND INJECTION CONTROL PERMIT
Cause No. UIC-378.1

Operator: Integrated Water Management, LLC

Well: IWM SWD 3-30 B4

Location: Section 30, Township 2 South, Range 4 West, USM

County: Duchesne

API No.: 43-013-50753

Well Type: Saltwater Disposal

Stipulations of Permit Approval

1. Approval for conversion to Injection Well issued on **October 26, 2011.**
2. Maximum Allowable Injection Pressure: 525 psig
3. Maximum Allowable Injection Rate: (restricted by pressure limitation)
4. Injection Interval: Lower Uinta Formation (4,063' – 5,130')
5. A Radioactive Tracer Survey is to be run 90 days after date of injection approval, in order to demonstrate which perforated zones are accommodating water.
6. Maximum Cumulative Injection Volume: 1.88 x 10^7 barrels; to be re-evaluated after the results of the RAT survey.
7. The off-setting well (Christman-Bland 1-31, 43-013-30198) shall be monitored on a weekly basis and reported to the Division monthly. In the event that pressure changes are noted, **Injection Shall Cease Immediately** and the Division shall be notified.

Approved by: _____ 11-07-2011
John Rogers
Associate Director
Date

JR/AM/js
cc: Bruce Suchomel, Environmental Protection Agency
Duchesne County
Well File
N:\O&G Permits\Injection Permits\Integrated Water Mng

UTAH DNR
OIL, GAS & MINING

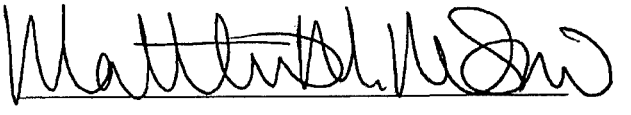
BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF INTEGRATED WATER MANAGEMENT, LLC FOR ADMINISTRATIVE APPROVAL OF THE IWM SWD 3-30 B4 SWD WELL LOCATED IN SECTION 30, TOWNSHIP 2 SOUTH, RANGE 4 WEST, DUCHESNE COUNTY, UT AS A CLASS II INJECTION WELL	**MOTION TO WITHDRAW REQUEST FOR FORMAL AGENCY ACTION** Docket No. 2011-017 Cause No. UIC-378.1

INTEGRATED WATER MANAGEMENT (IWM), LLC, Petitioner, by and through its undersigned counsel, submits the following motion to withdraw it's request for formal agency action and request for hearing and revert the action to the original informal action as filed by the Division.

On August 10, 2011, IWM filed a Request for Agency Action in order to have its application for a Class II injection well heard by the Board of Oil Gas and Mining as required by the rules because an objection to IWM's UIC application had been received by the Division from ProWater, LLC. However, ProWater, LLC has since notified the Division in writing withdrawing its objection to IWM's UIC application. Therefore, the hearing is no longer required under Rule R649-5-3 U.A.C. For this reason, IWM respectfully requests that the application be considered by the Division under the informal rules as originally noticed pursuant to R649-10-1 *et seq.* and the hearing before the Board scheduled for September 29, 2011 be cancelled.

Submitted this 9th day of September, 2011



Matthew M. Nelson
Nelson Law, PLLC
Attorney for Petitioner

90 S 400 W Ste 360
Salt Lake City, UT 84101
801-456-1286
mattmnelson1@gmail.com

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF INTEGRATED WATER MANAGEMENT, LLC FOR ADMINISTRATIVE APPROVAL OF THE IWM SWD 3-30 B4 SWD WELL LOCATED IN SECTION 30, TOWNSHIP 2 SOUTH, RANGE 4 WEST, DUCHESNE COUNTY, UT AS A CLASS II INJECTION WELL	**REQUEST FOR AGENCY ACTION** Docket No. Cause No.

INTEGRATED WATER MANAGEMENT (IWM), LLC, Petitioner, by and through its undersigned counsel, petitions the Board of Oil, Gas and Mining for an order approving the IWM SWD 3-30 B4 SWD Well as a Class II injection well and authorizing the underground injection of produced water for purposes of water disposal, and shows as follows:

1. Integrated Water Management, LLC ("IWM") is a Utah limited liability company in good standing, having its principal place of business in SLC, Utah. IWM is qualified to and is doing business in Utah.

2. The Board of Oil, Gas and Mining (the "Board") has jurisdiction of the parties and subject matter of this Request for Agency Action, pursuant to Section 40-6-5(5)(a) of the Utah Code Annotated and Rules R649-5-1 and R649-5-3(4) of the Utah Administrative Code ("U.A.C.").

PROCEDURAL POSTURE

3. IWM originally filed its application for administrative approval of the IWM SWD 3-30 B4 Well located in the SESE of Section 30, Township 2 S., Range 4 W. Duchesne County, Utah (the "Subject Well" and "Subject Lands," respectively) as a Class II underground injection well for the disposal of produced water on April 7, 2011. IWM gave notice of the Application

pursuant to the requirements of Rule R649-5-3, U.C.A., and provided a copy of the Application to all operators, owners, and surface owners within a one-half mile radius of the Subject Well as required by Rule R649-5-2, U.A.C. On July 12, 2011, the Division published notice of the Application in the Salt Lake Tribune and Uintah Basin Standard. Following publication of the notice of the Application, the Division received a letter dated July 27, 2011, from ProWater, LLC objecting to the application.

4. The purpose of this Request for Agency Action is to set the matter for hearing by the Board at the Board's regularly scheduled hearing on September 28, 2011.

UNDERGROUND INJECTION OF WATER

5. Petitioner seeks approval of the Subject Well as a Class II underground injection well and the authorization of operations for the underground injection of produced water into the Uinta Formation for water disposal purposes.

6. The Application for Permit to Drill ("APD") for the Subject Well was filed with the Division on April 28, 2011, and the APD was approved on June 7, 2011 The Subject Well was spud on June 18, 2011, later completed, cased, cemented, perforated, and set with production tubing with a production packer.

7. IWM will operate the Subject Well and the proposed injection operations.

8. The formation to be approved by the Board for water injection disposal operations is the Uinta Formation. The Uinta Formation is mainly a fluvial sand/shale deposit, the proposed gross injection interval is from 4063' to 5130' with a total of 180 feet of perforations, four shots per foot.

9. In this area, the injection interval in the Uinta Formation is not currently, nor is it ever expected to be, an underground source of drinking water ("USDW"). A swab test of the

10. The following wells have been drilled or completed within a one-half mile radius of the Subject Well:

a) Katherin 2-29 B4;
b) Christman Blann 1-31 B4;
c) Water Well 43-2422;
d) Water Well 43-10499;
e) Water Well 43-9196.

11. The water for the injection medium for the proposed injection operations will come from oil and gas producing wells in the Uintah Basin. IWM seeks authority to inject up to 5,000 barrels of produced water per day at an average injection pressure of 500 psi with a maximum injection pressure of 800 psi. Note that injection pressures are estimates. A step-rate test will be run along with a MIT and the results provided to the DOGM. Pressures are estimated from surrounding and adjacent SWD wells operated by other operators.

12. Copies of various electrical or radioactive logs that were run in the Subject Well prior to the installation of casing and after casing was set and cemented and have been filed with the Division and may be examined at the offices of the Division.

OWNERSHIP

13. IWM owns fee simple title to the Subject Lands.

14. The minerals in the lands embraced within the Subject Lands and within a one-half mile radius of the Subject Well are owned by El Paso Oil and Gas.

15. Besides IWM, the surface owners within a one-half mile radius of the Subject Well are listed as exhibit "A" and made a part hereof.

16. A plat showing the area involved and identifying all wells, including the proposed injection well, within a one-half mile radius of the proposed Subject Well is attached hereto as

17. The names and addresses of all operators and owners as defined in Section 40-6-2, Utah Code Annotated, and of all surface owners within a one-half mile radius of the proposed Subject Well are set forth in Exhibit "F" attached hereto and made a part hereof.

18. The Affidavit required by Rule R649-5-1 (2.9), U.A.C., is attached hereto as Exhibit "C" and made a part hereof.

WHEREFORE, Petitioner respectfully requests the Board to:

A. Set this matter for hearing at the regularly scheduled meeting of the Board to be held on September 28, 2011 to consider IWM's Application.

B. Give notice of this Request for Agency Action and the hearing as provided by the laws of the State of Utah and regulations issued pursuant thereto. The names and addresses of the parties interested in this matter are set forth in Exhibit "F" to this Request for Agency Action.

C. Conduct a hearing at which Petitioner and all authorized parties may be allowed to present evidence regarding IWM's Application.

D. To find that:

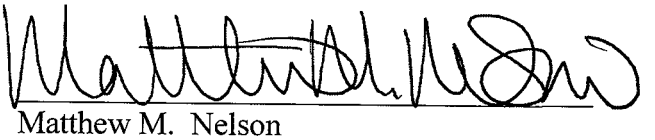
(1) The IWM SWD 3-30 B4 Well, as proposed, is suitable for approval as a Class II injection well.

(2) Good cause appears to authorize underground water disposal operations for produced water using the IWM SWD 3-30 B4 Well, as proposed.

E. Enter an order approving the IWM SWD 3-30 B4 Well as a Class II injection well and authorizing the underground injection of produced water into the Uinta Formation for

F. Provide such other relief as may be just and proper under the circumstances.

Dated this 10th day of August, 2011



Matthew M. Nelson
Nelson Law, PLLC
Attorney for Petitioner

90 S 400 W Ste 360
Salt Lake City, UT 84101
801-456-1286
mattmnelson1@gmail.com

Exhibit "A"
Owner List

Brent Farnsworth
PO Box 153
Duchesne, UT 84021-0153

William A. Robinson
243 E. Escondido Blvd #518
Escondido, CA 92025

J. Chrisman
146 Avenida Cota
San Clemente, CA 92672-3327

Jerry And Joann Craysper
840 E House Mountain Dr
Cottonwood, AZ 86326-2893

Heidi Kennelly
PO Box 2074
Mesquite, NV 89024-2074

Jose Luis Tomayo
4200 Dennis Dr
Salt Lake City, UT 84120-1615

Antonio Gandera Jr.
14808 Sabine Dr
LA Mirada, CA 90638-2143

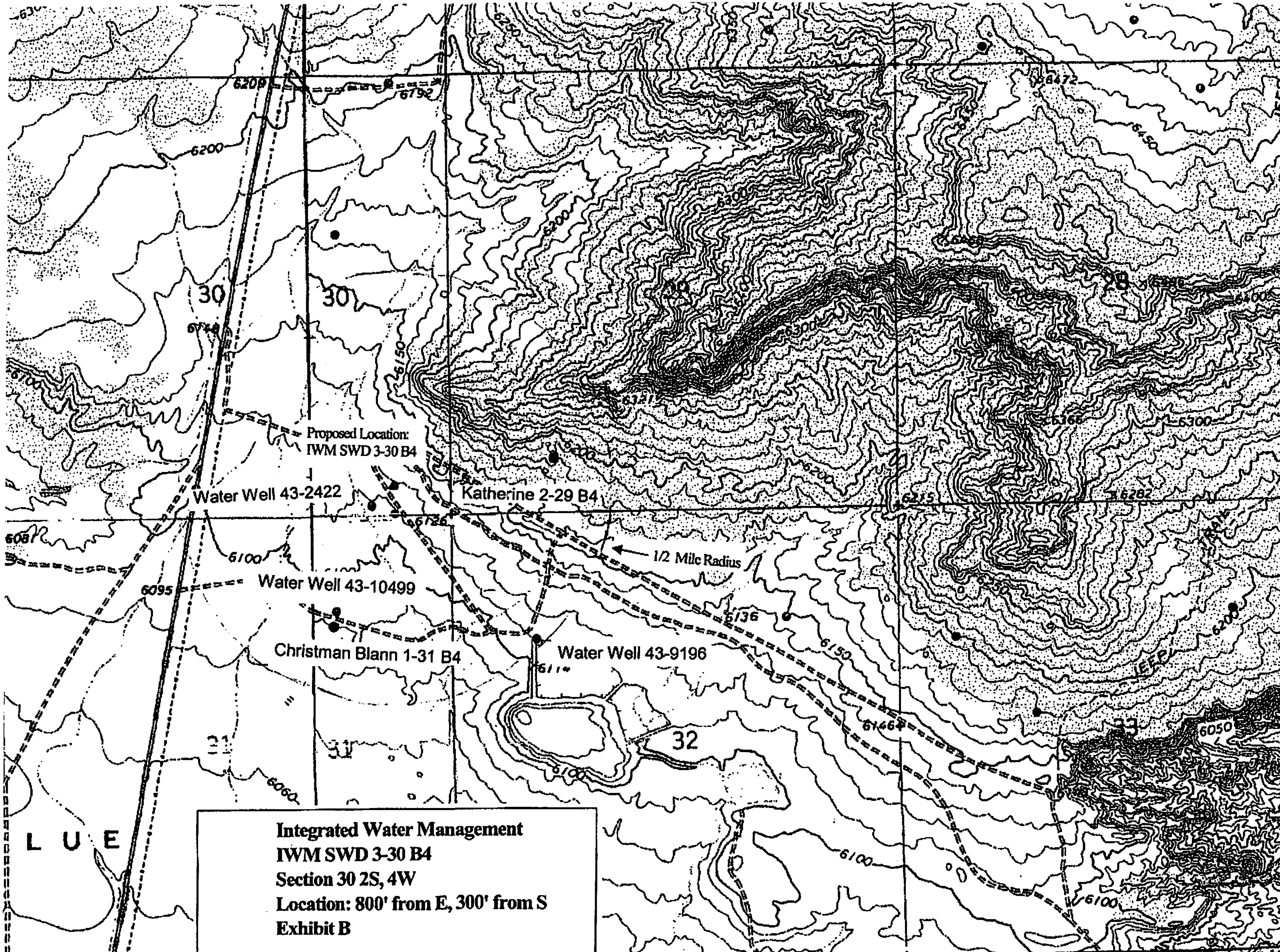
Ronnie W And Cristine Case
PO Box 70161
Salt Lake City, UT 84170-0161

Duchesne/Wasatch Blue Bench
Landfill C/o Manager
PO Box 228
Duchesne, UT 84021-0228

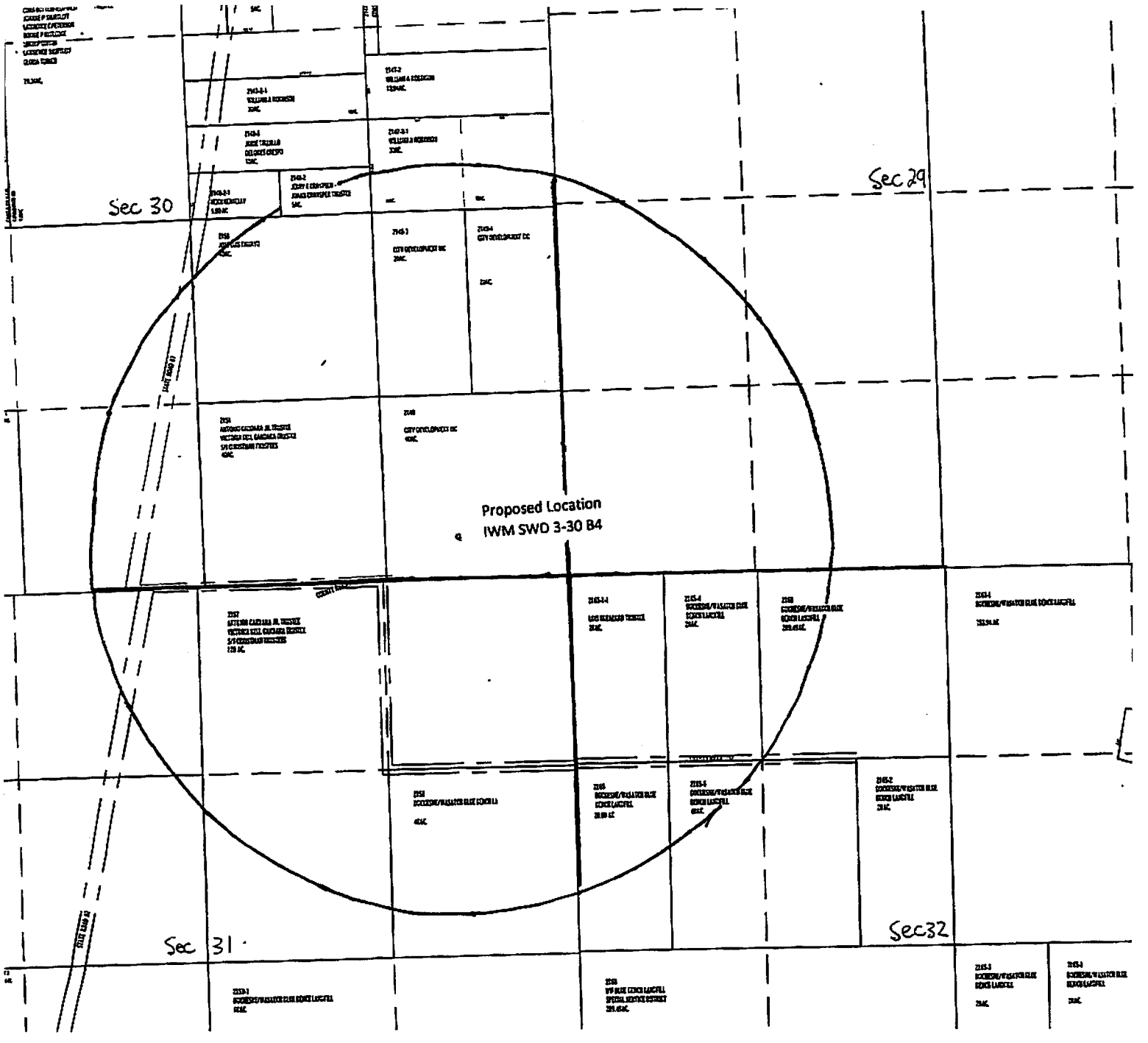
Lois Bleazard
PO Box 510033
Mountain Home, UT 84051-0033

El Paso E & P
Attention: Cathy Hammock
1099 18th St Ste 1900
Denver, CO 80202-1905

Exhibit "B"
Plat



Integrated Water Management
IWM SWD 3-30 B4
Section 30 2S, 4W
Location: 800' from E, 300' from S
Exhibit B



Integrated Water Management
IWM SWD 3-30 B4
Section 30 2S, 4W
Surface Owners within 1/2 mile radius
Exhibit A

Exhibit "C"

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF INTEGRATED WATER MANAGEMENT, LLC FOR ADMINISTRATIVE APPROVAL OF THE IWM SWD 3-30 B4 SWD WELL LOCATED IN SECTION 30, TOWNSHIP 2 SOUTH, RANGE 4 WEST, DUCHESNE COUNTY, UT AS A CLASS II INJECTION WELL	**AFFIDAVIT AND CERTIFICATE OF MAILING** Docket No. Cause No.

State of Utah)
:§
County of Salt Lake)

I, Matthew M. Nelson, having been duly sworn state that:

A. I reside in Salt Lake County, UT.

B. I am an attorney licensed in all Courts of Utah.

C. I make this statement pursuant to the requirements of R649-5-2(2.12).

D. I have caused to be mailed the Request for Agency action, the associated Exhibits, and UIC Form 1 to the persons listed in Exhibit "D" of the Request for Agency action as requires by R641-104-135 and R649-5-2(2.12), of the Utah Administrative Code, by US Mail, postage prepaid.

Dated this 10th day of August, 2011.

Matthew M. Nelson

Subscribed and sworn to before me on this 10 day of August, 2011 by Matthew M. Nelson

NOTARY PUBLIC

CONSTANCE MILLER
NOTARY PUBLIC - STATE OF UTAH
90 SOUTH 400 WEST, SUITE 330
SALT LAKE CITY, UT 84101
My Comm. Exp. 11/21/2011

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

APPLICATION FOR INJECTION WELL

Name of Operator: Integrated Water Management	Utah Account Number: N	Well Name and Number: IWM SWD 3-30 B4
Address of Operator: PO Box 430 CITY Altamont STATE UT ZIP 84001	Phone Number: (435) 454-4646	API Number:
Location of Well Footage : 800' FEL, 300' FSL QQ, Section, Township, Range: SESE 30 2S 4W	County : Duchesne State : UTAH	Field or Unit Name Lease Designation and Number

Is this application for expansion of an existing project?	Yes ☐	No ☑
Will the proposed well be used for: Enhanced Recovery?	Yes ☐	No ☐
Disposal?	Yes ☑	No ☐
Storage?	Yes ☐	No ☐
Is this application for a new well to be drilled?	Yes ☑	No ☐
If this application is for an existing well, has a casing test been performed?	Yes ☐	No ☐

Date of test: _____

Proposed injection interval: from 4,000 to 5,500

Proposed maximum injection: rate 5,000 bpd pressure 800 psig

Proposed injection zone contains oil ☑, gas ☐, and / or fresh water ☐ within ½ mile of the well.

List of attachments: Attached are write up with exhibits

ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Robert Ballou Title PG- Consultant

Signature Robert Ballou Date 4/7/2011

(5/2002)

Exhibit "D"
Mailing List

Brent Farnsworth
PO Box 153
Duchesne, UT 84021-0153

William A. Robinson
243 E. Escondido Blvd #518
Escondido, CA 92025

J. Chrisman
146 Avenida Cota
San Clemente, CA 92672-3327

Jerry And Joann Craysper
840 E House Mountain Dr
Cottonwood, AZ 86326-2893

Heidi Kennelly
PO Box 2074
Mesquite, NV 89024-2074

Jose Luis Tomayo
4200 Dennis Dr
Salt Lake City, UT 84120-1615

Antonio Gandera Jr.
14808 Sabine Dr
LA Mirada, CA 90638-2143

Ronnie W and Cristine Case
PO Box 70161
Salt Lake City, UT 84170-0161

Duchesne/Wasatch Blue Bench
Landfill C/O Manager
PO Box 228
Duchesne, UT 84021-0228

Lois Bleazard
PO Box 510033
Mountain Home, UT 84051-0033

El Paso E & P
Attention: Cathy Hammock
1099 18th St Ste 1900
Denver, CO 80202-1905

Duchesne County Planning
PO Box 317
Duchesne, UT 84021-0317

Bruce Suchomel
US Epa Region Viii
MS 8-p-w-gw
1595 Wynkoop St
Denver, CO 80202-1129

ProWater, LLC
12223 Highland Ave, Ste B503
Rancho Cucamonga, CA 91739

ProWater

September 7, 2011

Mr. Brad Hill
Oil & Gas Permitting Manager
P.O. Box 145801
Salt lake City, Utah 84114-5801

Dear Mr. Hill,

Re: Notice of Agency Action Cause No. UIC-378.1

I would like to **rescind our complaint toward** the application of Integrated Water Management LLC for administrative approval of the IWM SWD 3-30B4 Well (API#43-013-50753) located in Section 30, Township 2S, Range 4W, Duchesne County, Utah as a Class II Injection Well. We have completed our due diligence and have reevaluated our position.

Our existing facility is the Blue Bench SWD 13-1 Injection Well (API#43-013-30971) located in Section 13, Township 3S, Range 5W, Duchesne County, Utah.

Thank you for this consideration.

Sincerely,

K. Morlock

Keith Morlock
President
ProWater, LLC

435.709.8005 • 877.709.8005 fax
12223 Highland Ave, Suite B503 • Rancho Cucamonga, CA 91739

ProWater

July 27, 2011

Mr. Brad Hill
Oil & Gas Permitting Manager
P.O. Box 145801
Salt lake City, Utah 84114-5801

RECEIVED
AUG 0 2 2011
DIV. OF OIL, GAS & MINING

Dear Mr. Hill,

Re: Notice of Agency Action Cause No. UIC-378.1

I would like to **protest** the application of Integrated Water Management LLC for administrative approval of the IWM SWD 3-30B4 Well (API#43-013-50753) located in Section 30, Township 2S, Range 4W, Duchesne County, Utah as a Class II Injection Well. The proximity of the IWM well, to our current SWD well, would result in the direct injection of their water into the same formation and depths that we currently injecting into. This proposed IWM injection well is approximately 3 miles from our injection well and newly constructed water cleaning facility. They currently are permitted for evaporation pits, they are adding a centrifuge for additional capacity, but the injection well would severely hinder us from being able to inject into our zone and directly reduce its life expectancy.

I will need some time to prepare a formal response that shows how the IWM Well will cause substantial harm to our existing operation by interfering with our ability to inject into the formation that we currently use. Please allow for this preparation time when scheduling the hearing.

Our existing facility is the Blue Bench SWD 13-1 Injection Well (API#43-013-30971) located in Section 13, Township 3S, Range 5W, Duchesne County, Utah.

Thank you for this consideration.

Sincerely,

K. Morlock

Keith Morlock
President
ProWater, LLC.

435.709.8005 • 877.709.8005 fax
12223 Highland Ave, Suite B503 • Rancho Cucamonga, CA 91739

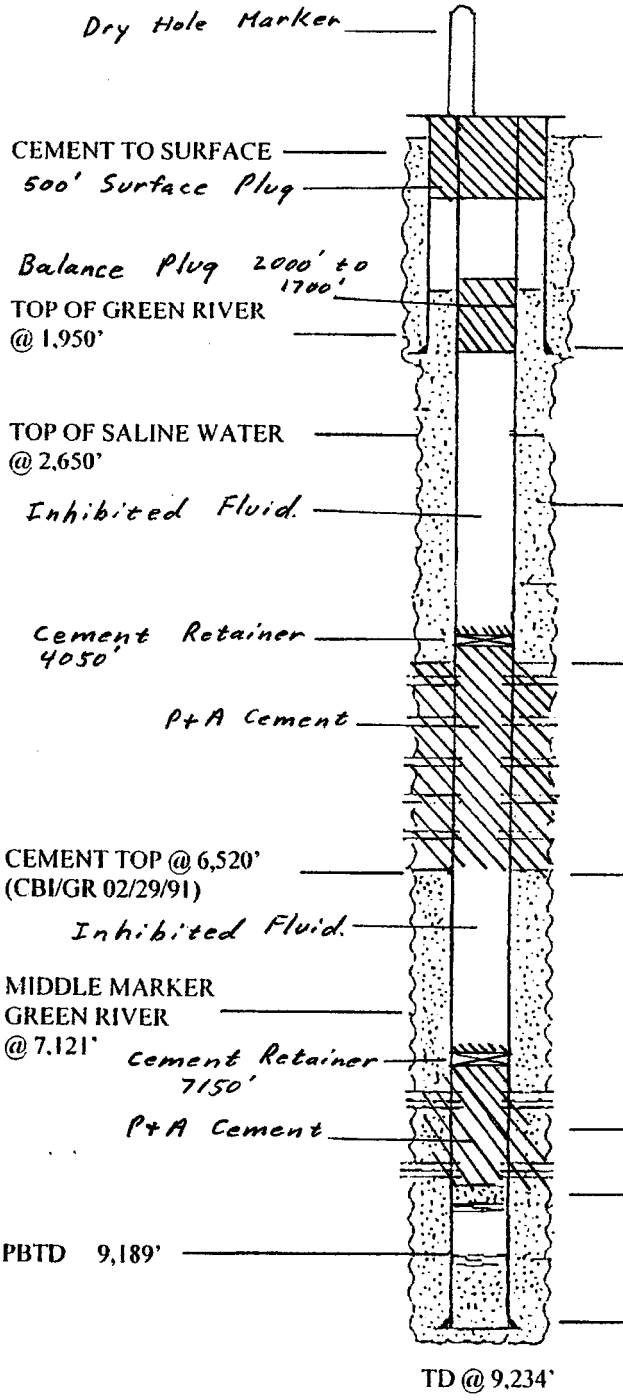
3-10-05

BLUE BENCH #13-1

BLUE BENCH DISPOSAL
NENE SEC 13 T3S - R5W
DUCHESNE CO., UTAH

WELLBORE SCHEMATIC

After P+A.



SURFACE CASING
9 5/8" @ 2,014'

CEMENT ISOLATION
PLUG 1,850' - 4,100'

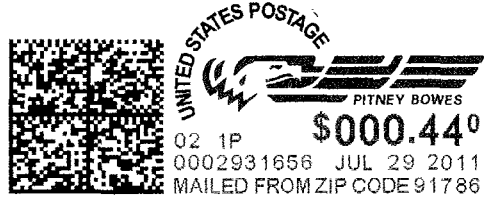
INJECTION ZONE
TOTAL INTERVAL - UPPER GREEN RIVER 4,100' - 6,520'
PERFS @ 4,106' - 4,121'
PERFS @ 4,832' - 4,847'
PERFS @ 5,268' - 5,283'
PERFS @ 6,085' - 6,090'

INJECTION ZONE
PERFS 7,231' - 7,257'
7,467' - 7,528'

PBTD 7,702'
CIBP 7,810'

PRODUCTION CASING
7" @ 9,234'

Keith Morlock
Pro Water, LLC
12223 Highland Ave. Ste B503
Rancho Cucamonga, CA 91739



Mr. Brad Hill
Oil & Gas Permitting Manager
P.O. Box 145801
Salt Lake City, Utah 84114-5801

84114$5801 B30D

AFFIDAVIT OF PUBLICATION

County of Duchesne,
STATE OF UTAH

I, Geoff Liesik on oath, say that I am the EDITOR of the Uintah Basin Standard, a weekly newspaper of general circulation, published at Roosevelt, State and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full issue such newspaper for 1 consecutive issues, and that the first publication was on the 19 day of July, 20 11, and that the last publication of such notice was in the issue of such newspaper dated the 19 day of July, 20 11, and that said notice was published on Utahlegals.com on the same day as the first newspaper publication and the notice remained on Utahlegals.com until the end of the scheduled run.

Editor

Subscribed and sworn to before me this
20 day of July, 20 11

Notary Public

BONNIE PARRISH
NOTARY PUBLIC-STATE OF UTAH
471 N HILLCREST DR 415-5
ROOSEVELT, UTAH 84066
COMM. EXP. 3-31-2012

NOTICE OF AGENCY ACTION CAUSE NO. UIC-378.1

BEFORE THE DIVISION OF OIL, GAS AND MINING, DEPARTMENT OF NATURAL RESOURCES, STATE OF UTAH.

IN THE MATTER OF THE APPLICATION OF INTEGRATED WATER MANAGEMENT LLC FOR ADMINISTRATIVE APPROVAL OF THE IWM SWD 3-30 B4 WELL (API #43-013-50753) LOCATED IN SECTION 30, TOWNSHIP 2S, RANGE 4W, DUCHESNE COUNTY, UTAH, AS A CLASS II INJECTION WELL.

4770 S. 5600 W.
P.O. BOX 704005
WEST VALLEY CITY, UTAH 84170
FED.TAX I.D.# 87-0217663

The Salt Lake Tribune | MEDIAOne of Utah | Deseret News

PROOF OF PUBLICATION

CUSTOMER'S COPY

CUSTOMER NAME AND ADDRESS	ACCOUNT NUMBER	DATE
DIV OF OIL-GAS & MINING, 1594 W NORTH TEMP #1210 P.O. BOX 145801 SALT LAKE CITY, UT 84114	9001402352	7/19/2011

RECEIVED
JUL 28 2011
DIV. OF OIL, GAS & MINING

ACCOUNT NAME	
DIV OF OIL-GAS & MINING,	
TELEPHONE	**ADORDER# / INVOICE NUMBER**
8015385340	0000708718 /
SCHEDULE	
Start 07/18/2011	End 07/18/2011
CUST. REF. NO.	
20110712	
CAPTION	
BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL	
SIZE	
54 Lines	2.00 COLUMN
TIMES	**RATE**
3	
MISC. CHARGES	**AD CHARGES**
	TOTAL COST
	140.00

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION

CAUSE NO. UIC-378.1

IN THE MATTER OF THE APPLICATION OF INTEGRATED WATER MANAGEMENT LLC FOR ADMINISTRATIVE APPROVAL OF THE IMW SWD 3-30 B4 WELL (API #43-013-50753) LOCATED IN SECTION 30, TOWNSHIP 2S, RANGE 4W, DUCHESNE COUNTY, UTAH, AS A CLASS II INJECTION WELL.

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of Integrated Water Management LLC for administrative approval of the IMW SWD 3-30B4 well (API #43-013-50753), located in SE/4 SE/4, Section 30, Township 2S, Range 4W, Uinta Baseline & Meridian, Duchesne County, Utah, for conversion to a Class II injection well. The proceeding will be conducted in accordance with Utah Admin. Rule R649-10, Administrative Procedures.

Selected zones in the lower Uinta Formation (4063'-5130' bgs) will be used for water disposal by injection. The maximum requested injection pressure and rate will be determined based on fracture gradient information submitted by Integrated Water Management LLC.

Any person desiring to object to the proposed application or otherwise intervene in the proceeding must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. The Division's Presiding Officer for the proceeding is Brad Hill, Oil & Gas Permitting Manager, at P.O. Box 145801, Salt Lake City, Utah 84114-5801, phone number (801) 538-5315. If such a protest or notice of intervention is received, a hearing will be scheduled in accordance with the aforementioned administrative procedure rule. Protestants and/or interveners should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 12th day of July, 2011.

STATE OF UTAH
DIVISION OF OIL, GAS & MINING
/s/
Brad Hill
Oil & Gas Permitting Manager
708718

UPAXLP

AFFIDAVIT OF PUBLICATION

AS NEWSPAPER AGENCY COMPANY, LLC dba MEDIAONE OF UTAH LEGAL BOOKER, I CERTIFY THAT THE ATTACHED ADVERTISEMENT OF **BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH NOTICE OF AGENCY ACTION CAUSE NO. UIC-378.1 IN THE MATTER OF THE APPL** FOR **DIV OF OIL-GAS & MINING,** WAS PUBLISHED BY THE NEWSPAPER AGENCY COMPANY, LLC dba MEDIAONE OF UTAH, AGENT FOR THE SALT LAKE TRIBUNE AND DESERET NEWS, DAILY NEWSPAPERS PRINTED IN THE ENGLISH LANGUAGE WITH GENERAL CIRCULATION IN UTAH. AND PUBLISHED IN SALT LAKE CITY, SALT LAKE COUNTY IN THE STATE OF UTAH. NOTICE IS ALSO POSTED ON UTAHLEGALS.COM ON THE SAME DAY AS THE FIRST NEWSPAPER PUBLICATION DATE AND REMAINS ON UTAHLEGALS.COM INDEFINATELY.

PUBLISHED ON Start 07/18/2011 End 07/18/2011

SIGNATURE Bobbey Taylor

7/19/2011

VIRGINIA CRAFT
Notary Public, State of Utah
Commission # 581469
My Commission Expires
January 12, 2014

Virginia Craft

THIS IS NOT A STATEMENT BUT A "PROOF OF PUBLICATION"
PLEASE PAY FROM BILLING STATEMENT

2250/REE/EDUCADMIN/GF11/6131

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION
CAUSE NO. UIC-378.1

IN THE MATTER OF THE APPLICATION OF INTEGRATED WATER MANAGEMENT LLC FOR ADMINISTRATIVE APPROVAL OF THE IWM SWD 3-30 B4 WELL (API #43-013-50753) LOCATED IN SECTION 30, TOWNSHIP 2S, RANGE 4W, DUCHESNE COUNTY, UTAH, AS A CLASS II INJECTION WELL.

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Dated this 12th day of July, 2011.

STATE OF UTAH
DIVISION OF OIL, GAS & MINING

Brad Hill
Oil & Gas Permitting Manager

Integrated Water Management LLC
IMW SWD 3-30B4
Cause No. UIC-378.1

Publication Notices were sent to the following:

Marie O'Keefe, Senior Regulatory Analyst
El Paso E & P
1099 18th St., Suite 1900
Denver, CO 80202

Uintah Basin Standard
268 S 200 E
Roosevelt, UT 84066
via e-mail legals@ubstandard.com

Salt Lake Tribune
PO Box 45838
Salt Lake City, UT 84145
via e-mail naclegal@mediaoneutah.com

Duchesne County Planning
P.O. Box 317
Duchesne UT 84021-0317

Bruce Suchomel
US EPA Region VIII
MS 8-P-W-GW
1595 Wynkoop Street
Denver, CO 80202-1129

Robert Ballou
Ballou Geologic Consulting
P.O. Box 816
Roosevelt, UT 84066

Jean Sweet

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

July 13, 2011

Via e-mail: naclegal@mediaoneutah.com

The Salt Lake Tribune
PO Box 45838
Salt Lake City, UT 84145

Subject: Notice of Agency Action – Integrated Water Management LLC Cause No. UIC-378.1

To Whom It May Concern:

Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please notify me via e-mail of the date it will be published. My e-mail address is: jsweet@utah.gov.

Please send proof of publication and billing for **account #9001402352** to:

Division of Oil, Gas and Mining
Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet
Executive Secretary

Enclosure

The Salt Lake Tribune WWW.SLTRIB.COM | MEDIAOne of Utah A NEWSPAPER AGENCY COMPANY WWW.MEDIAONUTAH.COM | Deseret News WWW.DESERETNEWS.COM

Remit to: P.O. Box 704005
West Valley City, UT 84170

Order Confirmation for Ad #0000708718-01

Client	DIV OF OIL-GAS & MINING	**Payor Customer**	DIV OF OIL-GAS & MINING
Client Phone	801-538-5340	**Payor Phone**	801-538-5340
Account#	9001402352	**Payor Account**	9001402352
Address	1594 W NORTH TEMP #1210,P.O. BOX 145801 SALT LAKE CITY, UT 84114 USA	**Payor Address**	1594 W NORTH TEMP #1210,P.O. BO) SALT LAKE CITY, UT 84114
Fax	801-359-3940	**Ordered By**	**Acct. Exec**
EMail	earlenerussell@utah.gov	Jean	mfultz

Total Amount	**$140.00**
Payment Amt	**$0.00**
Amount Due	**$140.00**

Tear Sheets	Proofs	Affidavits
0	0	1

Payment Method

PO Number 20110712

Confirmation Notes:

Text:

Ad Type	Ad Size	Color
Legal Liner	2.0 X 54 Li	<NONE>

Product	**Placement**	**Position**
Salt Lake Tribune::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	07/18/2011	
Product	**Placement**	**Position**
sltrib.com::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	07/18/2011	
Product	**Placement**	**Position**
utahlegals.com::	utahlegals.com	utahlegals.com
Scheduled Date(s):	07/18/2011	

Ad Content Proof Actual Size

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION

CAUSE NO. UIC-378.1

IN THE MATTER OF THE APPLICATION OF INTEGRATED WATER MANAGEMENT LLC FOR ADMINISTRATIVE APPROVAL OF THE IWM SWD 3-30 84 WELL (API #43-013-50753) LOCATED IN SECTION 30, TOWNSHIP 2S, RANGE 4W, DUCHESNE COUNTY, UTAH, AS A CLASS II INJECTION WELL.

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of Integrated Water Management LLC for administrative approval of the IMW SWD 3-3084 well (API #43-013-50753), located in SE/4 SE/4, Section 30, Township 2S, Range 4W, Uinta Baseline & Meridian, Duchesne County, Utah, for conversion to a Class II injection well. The proceeding will be conducted in accordance with Utah Admin. Rule R649-10, Administrative Procedures.

Selected zones in the lower Uinta Formation (4063'-5130' bgs) will be used for water disposal by injection. The maximum requested injection pressure and rate will be determined based on fracture gradient information submitted by Integrated Water Management LLC.

Any person desiring to object to the proposed application or otherwise intervene in the proceeding must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. The Division's Presiding Officer for the proceeding is Brad Hill, Oil & Gas Permitting Manager, at P.O. Box 145801, Salt Lake City, Utah 84114-5801, phone number (801) 538-5315. If such a protest or notice of intervention is received, a hearing will be scheduled in accordance with the aforementioned administrative procedure rule. Protestants and/or interveners should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 12th day of July, 2011.

STATE OF UTAH
DIVISION OF OIL, GAS & MINING
/s/
Brad Hill
Oil & Gas Permitting Manager
708718

UPAXLP

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

July 13, 2011

Via e-mail: legals@ubstandard.com

Uintah Basin Standard
268 S 200 E
Roosevelt UT 84066

Subject: Notice of Agency Action – Integrated Water Management LLC Cause No. UIC-378.1

To Whom It May Concern:

Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please notify me via e-mail of the date it will be published. My e-mail address is: jsweet@utah.gov.

Please send proof of publication and billing to:

Division of Oil, Gas and Mining
Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet

Jean Sweet
Executive Secretary

Enclosure

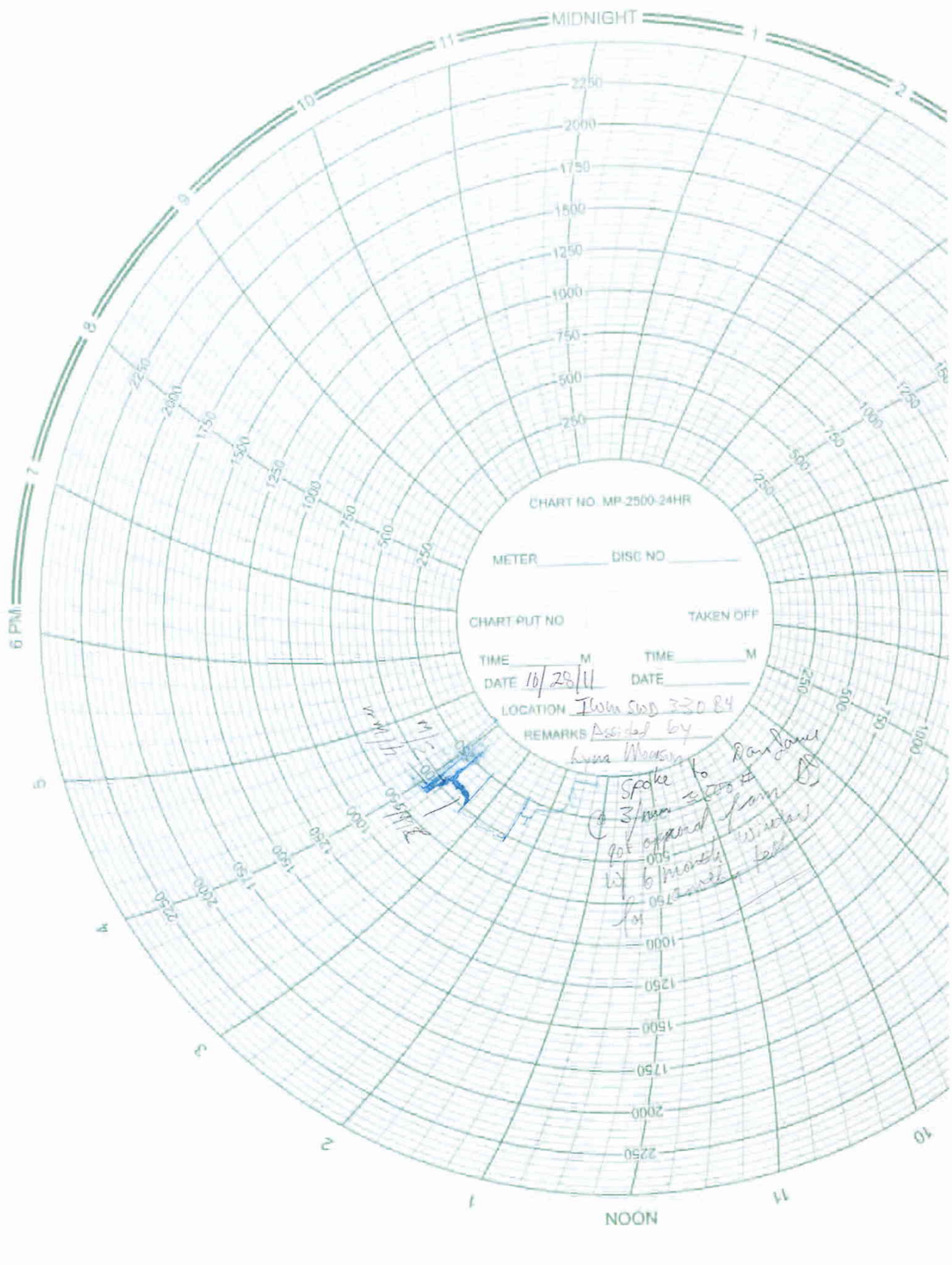
Jean Sweet - Re: Notice of Agency Action – Integrated Water Management LLC Cause No. UIC-378.1

From: Cindy Kleinfelter <classifieds@ubstandard.com>
To: Jean Sweet <jsweet@utah.gov>
Date: 7/14/2011 11:16 AM
Subject: Re: Notice of Agency Action – Integrated Water Management LLC Cause No. UIC-378.1

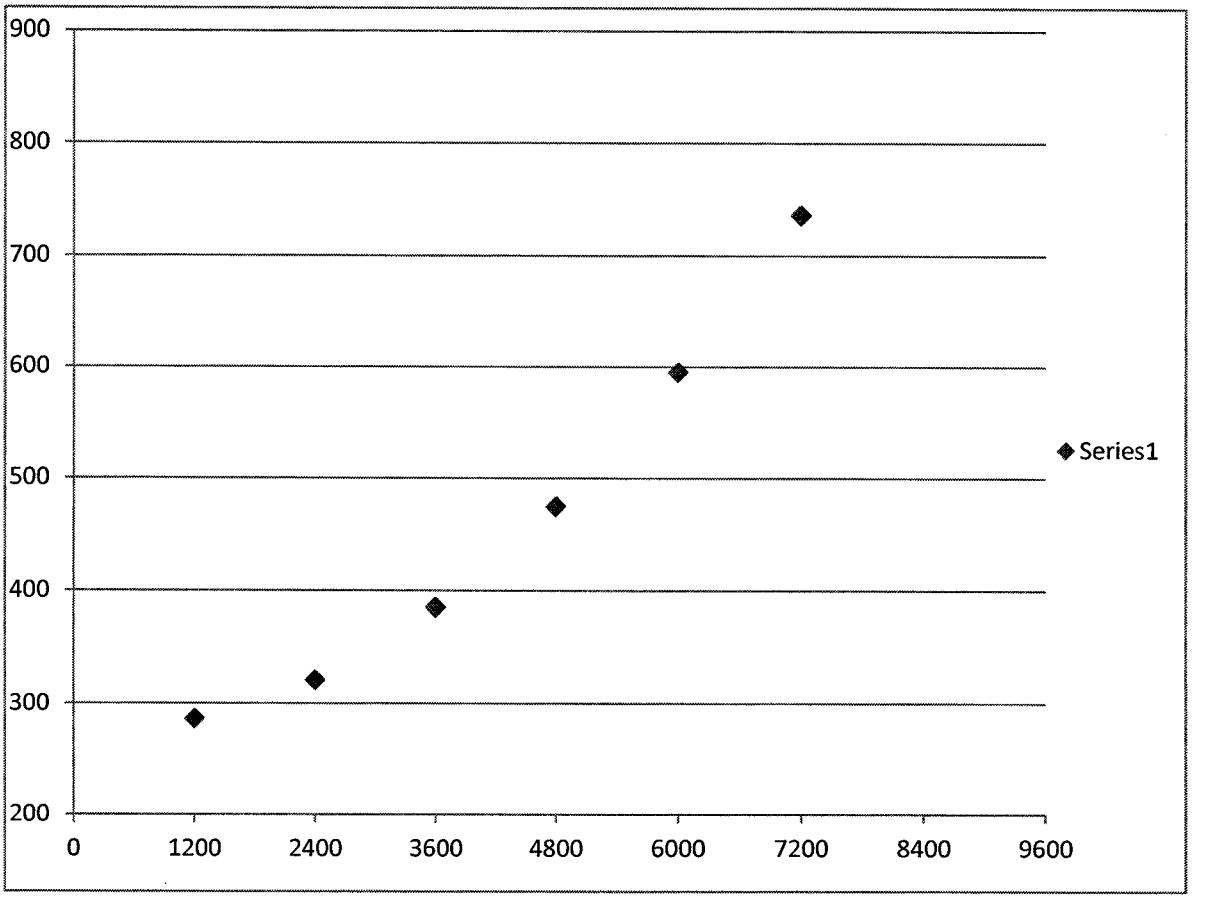
On 7/13/2011 1:36 PM, Jean Sweet wrote:

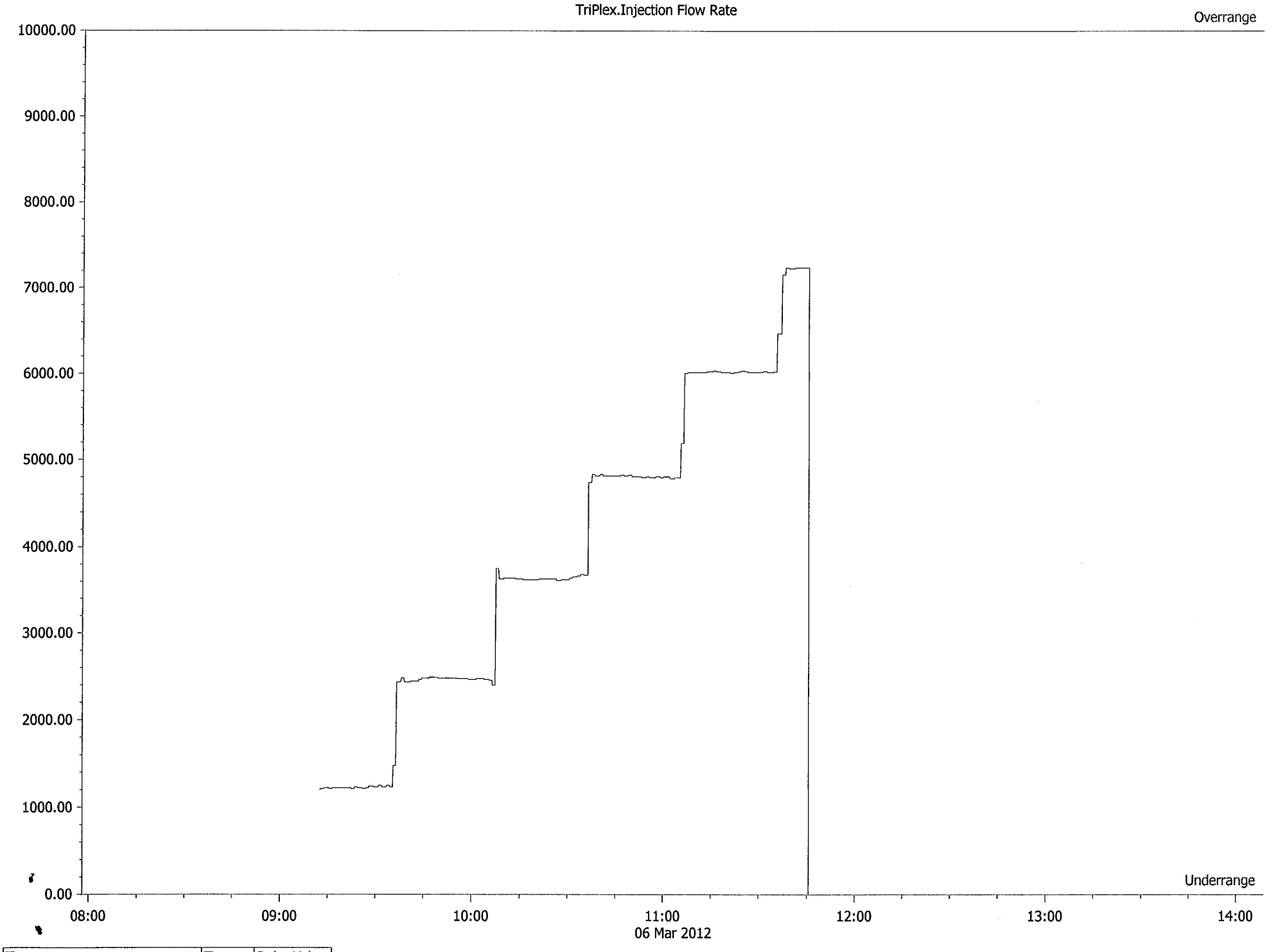
> To Whom It May Concern:
>
> Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please notify me via e-mail of the date it will be published. My e-mail address is: jsweet@utah.gov.
>
> Please send proof of publication and billing to:
>
> Division of Oil, Gas and Mining
> Suite 1210
> PO Box 145801
> Salt Lake City, UT 84114-5801
>
> Sincerely,
>
> Jean Sweet, Executive Secretary
> Utah Div. of Oil, Gas & Mining
> 1594 West Temple, Suite 1210
> Salt Lake City, UT
> 801-538-5329
> jsweet@utah.gov

This will be published July 19, 2011.
Thank you.
Cindy


MIDNIGHT
6 PM
NOON
CHART NO. MP-2500-24HR
METER
DISC NO
CHART PUT NO
TAKEN OFF
TIME M
TIME M
DATE 10/28/11
DATE
LOCATION Iwm SWD 330 84
REMARKS Assisted by
Luna Meason
Spoke to Dan Dame
@ 3/mm 3000#
got approval from D
W/ 6 month window
for ... fell

Rate	Pressure	
1200	286	14
2400	321	35
3600	385	64
4800	475	90
6000	595	120
7200	736	141
8400	0	





Trace	Type	Ruler Value
◆ TriPlex.Injection Flow Rate	Current	-

165T-5 Triplex Plunger Pump

Performance Data

PUMP	English Units					100 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM	
	Plunger Dia. In.	Plunger Area Sq. In.	BPD per RPM	GPM per RPM	Max. Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
165T-5L	4.000	12.5664	27.9770	0.8160	780	2798	81.6	5596	163.2	6995	204.0	8394	244.8	9792	285.6	11191*	326*
→	3.750	11.0447	24.5892	0.7172	887	2459	71.7	4918	143.4	6148	179.3	7377	215.2	8607	251.0	9836	286.9
	3.500	9.6211	21.4199	0.6247	1019	2142	62.5	4284	124.9	5355	156.2	6426	187.4	7497	218.7	8568	249.9
	3.250	8.2958	18.4692	0.5387	1181	1847	53.9	3694	107.7	4618	134.7	5541	161.6	6465	188.5	7388	215.5
	3.000	7.0686	15.7371	0.4590	1386	1574	45.9	3148	91.8	3935	114.7	4722	137.7	5508	160.6	6295	183.6
	2.750	5.9396	13.2235	0.3857	1650	1323	38.6	2645	77.1	3306	96.4	3968	115.7	4629	135.0	5290	154.3
165T-5M	2.750	5.9396	13.2235	0.3857	1650	1323	38.6	2645	77.1	3306	96.4	3968	115.7	4629	135.0	5290	154.3
	2.500	4.9087	10.9285	0.3187	1996	1093	31.9	2186	63.7	2733	79.7	3279	95.6	3825	111.6	4372	127.5
	2.375	4.4301	9.8630	0.2877	2212	987	28.8	1973	57.5	2466	71.9	2959	86.3	3453	100.7	3946	115.1
	2.250	3.9761	8.8521	0.2582	2465	886	25.8	1771	51.6	2214	64.5	2656	77.5	3099	90.4	3541	103.3
	2.125	3.5466	7.8959	0.2303	2763	790	23.0	1580	46.1	1974	57.6	2369	69.1	2764	80.6	3159	92.1
	2.000	3.1416	6.9943	0.2040	3120	700	20.4	1399	40.8	1749	51.0	2099	61.2	2448	71.4	2798	81.6
165T-5H	2.000	3.1416	6.9943	0.2040	3120	700	20.4	1399	40.8	1749	51.0	2099	61.2	2448	71.4	2798	81.6
	1.875	2.7612	6.1473	0.1793	3549	615	17.9	1230	35.9	1537	44.8	1845	53.8	2152	62.8	2459	71.7
	1.750	2.4053	5.3550	0.1562	4074	536	15.6	1071	31.2	1339	39.0	1607	46.9	1875	54.7	2142	62.5
	1.625	2.0739	4.6173	0.1347	4725	462	13.5	924	26.9	1155	33.7	1386	40.4	1617	47.1	1847	53.9
	1.500	1.7671	3.9343	0.1147	5000	394	11.5	787	22.9	984	28.7	1181	34.4	1377	40.2	1574	45.9
	Brake Horsepower Required					42		83		104		124		144		165	

PUMP	Metric Units					100 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM	
	Plunger Dia. mm	Plunger Area cm^2	M^3/Hr per RPM	L/Sec. per RPM	Max. Press. kPa	M^3/Hr	L/Sec.	M^3/Hr	L/Sec.	M^3/Hr	L/Sec.	M^3/Hr	L/Sec.	M^3/Hr	L/Sec.	M^3/Hr	L/Sec.
165T-5L	102	81.073	0.1853	0.0515	5377	18.5	5.1	37.1	10.3	46.3	12.9	55.6	15.4	64.9	18.0	74.1*	20.6*
	95	71.256	0.1629	0.0452	6118	16.3	4.5	32.6	9.0	40.7	11.3	48.9	13.6	57.0	15.8	65.1	18.1
	89	62.072	0.1419	0.0394	7023	14.2	3.9	28.4	7.9	35.5	9.9	42.6	11.8	49.7	13.8	56.8	15.8
	83	53.521	0.1223	0.0340	8145	12.2	3.4	24.5	6.8	30.6	8.5	36.7	10.2	42.8	11.9	48.9	13.6
	76	45.604	0.1042	0.0290	9559	10.4	2.9	20.8	5.8	26.1	7.2	31.3	8.7	36.5	10.1	41.7	11.6
	70	38.320	0.0876	0.0243	11376	8.8	2.4	17.5	4.9	21.9	6.1	26.3	7.3	30.7	8.5	35.0	9.7
165T-5M	70	38.320	0.0876	0.0243	11376	8.8	2.4	17.5	4.9	21.9	6.1	26.3	7.3	30.7	8.5	35.0	9.7
	64	31.669	0.0724	0.0201	13765	7.2	2.0	14.5	4.0	18.1	5.0	21.7	6.0	25.3	7.0	29.0	8.0
	60	28.581	0.0653	0.0181	15252	6.5	1.8	13.1	3.6	16.3	4.5	19.6	5.4	22.9	6.4	26.1	7.3
	57	25.652	0.0586	0.0163	16994	5.9	1.6	11.7	3.3	14.7	4.1	17.6	4.9	20.5	5.7	23.5	6.5
	54	22.881	0.0523	0.0145	19052	5.2	1.5	10.5	2.9	13.1	3.6	15.7	4.4	18.3	5.1	20.9	5.8
	51	20.268	0.0463	0.0129	21512	4.6	1.3	9.3	2.6	11.6	3.2	13.9	3.9	16.2	4.5	18.5	5.1
165T-5H	51	20.268	0.0463	0.0129	21512	4.6	1.3	9.3	2.6	11.6	3.2	13.9	3.9	16.2	4.5	18.5	5.1
	48	17.814	0.0407	0.0113	24471	4.1	1.1	8.1	2.3	10.2	2.8	12.2	3.4	14.3	4.0	16.3	4.5
	44	15.518	0.0355	0.0099	28092	3.5	1.0	7.1	2.0	8.9	2.5	10.6	3.0	12.4	3.4	14.2	3.9
	41	13.380	0.0306	0.0085	32580	3.1	0.8	6.1	1.7	7.6	2.1	9.2	2.5	10.7	3.0	12.2	3.4
	38	11.401	0.0261	0.0072	34474	2.6	0.7	5.2	1.4	6.5	1.8	7.8	2.2	9.1	2.5	10.4	2.9
	Kilowatts Required					31		62		78		92		108		123	

Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% Mechanical Efficiency. For Operation below 200 RPM, an auxiliary lubrication system is required. Not all plunger sizes are shown. Contact National-Oilwell for additional information. *Spherical Valves must be installed when the pump is fitted with 4.0" (102mm) plungers

Authorized Distributor:

NATIONAL OILWELL VARCO

www.nov.com • mission.sales@nov.com
10000 Richmond, Houston, Texas 77042
(713)346-7500 (phone) • (713)346-7366 (fax)

elpaso Exploration & Production

April 28, 2011

Mr. Brad Hill
State of Utah
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Letter of No Objection to Hardline Exception
Integrated Water Management Saltwater Disposal Well #3-30B4
SE/4SE/4 of Section 30, Township 2 South, Range 4 West
Duchesne County, Utah

Mr. Hill,

El Paso, as offset operator, has no objection to Integrated Water Management drilling a saltwater disposal well, the IWM SWD 3-30B4, to be located 800' from the east line and 300' from the south line of Section 30, Township 2 South, Range 4 West, Duchesne County, Utah, at the proposed injection interval of 4,000' 5,500' and with a maximum injection pressure as deemed acceptable to the Division of Oil, Gas and Mining.

If you have any questions, please call me at 303-291-6422.

Very truly yours,

El Paso E&P Company, L.P.

Catherine L. Hammock

Catherine L. Hammock
Sr. Staff Landman – Altamont Business Area

El Paso E&P Company, L.P.
1099 18th Street, Suite 1900 Denver, Colorado 80202
tel 303.291.6400 fax 303 291.6487

STEP RATE TEST DATA

Well: LWMSWD 330 BY Date: 10/27/11 Operator RL Co llouWater Integrated Unqnl

STEP #1 Test Rate (5% of maximum rate) .3 (bbl/min)

Time (min)	0	5	10	15	20	25	30
Pressure (psi)	0	<20 →					

STEP #2 Test Rate (10% of maximum rate) .6 (bbl/min)

Time (min)	0	5	10	15	20	25	30
Pressure (psi)	0	150	250	260	270	280	280

Note @ this point tested @ higher rate had little change in pressure -

STEP #3 Test Rate (20% of maximum rate) 2.8 (bbl/min)

Time (min)	0	5	10	15	20	25	30
Pressure (psi)	280	300	300	300	525	525	525

Note Raised to 3.0 bbl/min - Note small drops in pressure as shown on chart.

STEP #4 Test Rate (40% of maximum rate) 2. (bbl/min)

Time (min)	0	5	10	15	20	25	30
Pressure (psi)	400	≈400 but	lots of	pressure ≈400	fluctuation →		

@ this point called DAN - did a 3 bbl/min

STEP #5 Test Rate (60% of maximum rate) (bbl/min)

Time (min)	0	5					
Pressure (psi)	400	400					

did 4 bbl min

STEP #6 Test Rate (80% of maximum rate) (bbl/min)

Time (min)	0	5					
Pressure (psi)	525	525					

STEP #7 Test Rate (100% of maximum rate) (bbl/min)

Time (min)							
Pressure (psi)							

ISIP : (psi)

Test Run / Witnessed By:

Note pressure would not hold - expected to have pressure double when rate doubled - will re-evaluate as directed by Dan in 6 months after partial fill up - In consistant w/ wells in the area the well injection pressure will be < 800#. Calculated pressure was ≈ 890# for this interval -

3

INSPECTION FORM 6

STATE OF UTAH
DIVISION OF OIL GAS AND MINING

INJECTION WELL - PRESSURE TEST

Well Name: J Wm SWD 3-30L4 API Number: 43-013-50753
Qtr/Qtr: SE/SE Section: 30 Township: 2S Range: 4W
Company Name: NEWFIELD
Lease: State ____ Fee ✓ Federal ____ Indian ____
Inspector: Dennis L Ingram Date: 10/27/11

Initial Conditions:

Tubing - Rate: Ø Pressure: Ø OPEN psi

Casing/Tubing Annulus - Pressure: 1360 psi

Conditions During Test: BARTON

Time (Minutes)	Annulus Pressure		Tubing Pressure	
0	1360	1200	Ø	Ø
5	1360	1205		
10	1360	1210		
15	1350	1210		
20	1345	1210		
25	1340	1205		
30	1330	1200	Ø	Ø

Results: Pass/Fail

Conditions After Test:

Tubing Pressure: Ø psi

Casing/Tubing Annulus Pressure: 1200 psi

COMMENTS: Tested by Closing Valve & Leaving Pump Hooked Up @ 10:25 AM (fail); Disconnected pump truck & installed Barton Gauge w/ No escape @ 11:15 AM (PASS)

Operator Representative

Memo to John Rogers

Re: IWM SWD Application.

John:

As the supervisor over these programs I wanted to re-state our case and clarify some issues and update you on what IWM is doing to resolve this situation. It is the wish of IWM that this situation be dealt with administratively. Steps have been taken by IWM that will satisfy the DOGM (engineering reports etc.), and allow this issue to be resolved. Additional work could then be done by IWM (Step Rate Test, MIT) to allow IWM to receive a permit to inject in their SWD well.

You are probably aware as well that Brad Hill notified me that Pro Water has removed their objection and IWM's corporate council Matt Nelson has been instructed by Steve Alder to notify the board. I told Brad at that time some of the things that IWM is doing as outlined below and he appeared to be OK with what we were doing.

I have listed two rules that seem to be the crux of what the issues are:

Rule 649-3-4.1.

Prior to the commencement of drilling, deepening or plugging back of any well, exploratory drilling such as core holes and stratigraphic test holes, or any surface disturbance associated with such activity, the operator shall submit Form 3, Application for Permit to Drill, Deepen, or Plug Back and obtain approval. Approval shall be given by the division if it appears that the contemplated location and operations are not in violation of any rule or order of the board for drilling a well.

Notice was sent on April 8th to DOGM in the form of a completed application for a SWD well. The division was notified, the El Paso wells are working wells with no issues, the well files were reviewed at that time. If there was a problem then IWM should have been notified and possible action could have been taken before the drilling of the well.

Rule 649-5- 2.11.

A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no conduit exists that could enable fluids to migrate up or down the wellbore and enter improper intervals.

In this matter I believe that "No conduit exists that would allow fluid to enter improper intervals". I support that statement with the following points:

- The 7" casing was cemented from TD to 6900'. It was done that way intentionally to allow a solid foundation for the setting of the main production casing (the 4 1/2") and allow for the 7" casing to be cut off and pulled when the well is finally plugged. This is consistent with most wells drilled in the area. Additionally in every well in the area all production has been at depths greater than 10,000'. Since the casing is cemented to 6900' fluid affecting any production zone in offset wells is not an issue.
- The 9 5/8" casing was cemented from 4519' to 2300'. No fluid can travel on the backside of the 9 5/8" casing.
- In the unlikely event that a hole developed in the 9-5/8" casing it would have to be large enough for any measurable amount of fluid to travel up the casing between the 7" and the 9-5/8" and enter a zone that is deemed an improper interval.
- The Conductor pipe was set at 300' which is below the interval where a majority of the water wells drilled in the area are currently pumping from.

In order to further explore every option and assure that the above requirement (Rule 649-5- 2.11) was being adhered to the following individuals were consulted and given information concerning this situation:

1. Vince Guinn PE with over 20 years experience in the Uintah Basin.
2. Bill Ryan PE with over 30 years experience in the Uintah Basin.
3. Ken Allen PE with over 30 years experience in the Uintah Basin.
4. Ellis Peterson PE with over 15 years experience in the Uintah Basin.
5. Steve Owen PE (Steve was the PE for Husky that drilled the 1-31 B4)

All agreed after a review of the well bore schematic and other additional data that since the 1-31 B4 is a producing well, MIT is in effect and that the likely hood of fluid entering "improper intervals" was virtually nonexistent. Both Elis Peterson and Bill Ryan suggested that to afford any extra degree of assurance the backsides of the 1-31 B4 could be monitored by installing a simple pressure gauge.

Additional important factors:

- The IWM well is down dip by approximately 68' to the 1-31 B4. It is generally agreed that when the fluid enters the IWM well bore that the plume of water will be in a general north south eclipse with more of the fluid going down dip or north away from the 1-31 B4.
- In order for any fluid to travel up the casing between the 7" and the 9- 5/8" sufficient pressure would have to be available to push the fluid up 3000'.

To support the above statements, IWM has retained a highly respected and certified Hydrologic Engineer (John Wood P.E.) and also a very experienced and certified Hydrologist (Rebecca Guston, PG in Utah with an MS in Hydrology and a BS

in Geology). Draft copies of those reports have been received by IWM. Both of these reports fully support the above issues.

It is IWM's position is to be pro active to provide applicable data for this issue. Copies of the final reports will be provided to the DOGM. Both reports deal with the pressure issues and capacity as it relates to Rule 649-5- 2.11.

In discussing this issue during a telephone conference in John Wood's office with Becca Guston (prior to them completing their reports), a suggestion was discussed (Proposed by Ellis Peterson and Bill Ryan), that a possible double check of the integrity of the casing may be to install at IWM's expense a separate gage on the wellhead on the backside of the 9-5/8" casing. The monitoring of these gages would insure that Mechanical Integrity of the casing is assured.

Summary:

- IWM will demonstrate with the Hydrological Engineering Reports that under the conditions outlined it is extremely improbable that any fluid could enter any strata above 2300'.
- If a further assurance is deemed necessary, IWM will instigate a monitoring program and report to the state the casing condition of the 1-31 B4 ASSURING that no fluid could enter Improper Intervals.
- Through these efforts IWM will satisfy the requirments as outlined by DOGM guidelines and regulations.

Thank you for your time and consideration in this matter. I would like to arrange a meeting with whoever needs to be there to provide closer to this matter.

Bob Ballou

	A	B	C	D	E	F	G	H	I	J	K	L
1	Produced Fluids #		1	2	3	4	5		Click here to run SSP		Click here: B/D, psia, F	
2	Parameters	Units	Input	Input	Input	Input	Input				Click here: m^3/D, bar, C	
3	Select the brines	Select fluid	☑	☑	☐	☐	☐	Mixed brine:				
4	Sample ID	by checking						Cell H28 is	Goal Seek SSP		Click here to output SI	
5	Date	the box(es),	6/22/2011	8/16/2010				STP calc. pH.				
6	Operator	Row 3	IWM	Bill Barrett				Cells H35-38			Click here to output SR	
7	Well Name		Injection	12-24-12-14				are used in				
8	Location		Formation Water	Prickly Pear				mixed brines				
9	Field							calculations.				
10	Na^+	(mg/l)*	27,333.00	15,909.00				27,334.91	Initial(BH)	Final(WH)	SI/SR (Final-Initial)	
11	K^+ (if not known =0)	(mg/l)	166.00	356.00				166.03	Saturation Index values			
12	Mg^{2+}	(mg/l)	23.00	352.00				23.00	Calcite			
13	Ca^{2+}	(mg/l)	228.00	1,913.00				228.02	0.00	-0.13	-0.13	
14	Sr^{2+}	(mg/l)	47.00	0.00				47.00	Barite			
15	Ba^{2+}	(mg/l)	11.00	4.00				11.00	2.06	2.00	-0.06	
16	Fe^{2+}	(mg/l)	70.00	83.00				70.00	Halite			
17	Zn^{2+}	(mg/l)	0.00	0.00				0.00	-3.76	-3.77	-0.01	
18	Cl^-	(mg/l)	39,100.00	27,900.00				39,102.73	Gypsum			
19	SO_4^{2-}	(mg/l)	830.00	1,040.00				830.06	-2.78	-2.79	-0.01	
20	F^-	(mg/l)						0.00	Hemihydrate			
21	Alkalinity**	(mg/l)	522.00	1,220.00				522.04	-3.55	-3.55	0.00	
22	Carboxylic acids**	(mg/l)	0.00	0.00				0.00	Anhydrite			
23	TDS (Measured)	(mg/l)	67,971.00	48,046.00				67,823.03	-3.04	-3.02	0.01	
24	Calc. Density (STP)	(g/ml)	1.043	1.031				1.043	Celestite			
25	CO_2 Gas Analysis	(%)						0.00	-1.09	-1.10	-0.01	
26	H_2S Gas Analysis***	(%)	0.0000	0.0000				0.0000	Iron Sulfide			
27	Total H2Saq	(mgH2S/l)						0.00				
28	pH, measured (STP)	pH	9.76	6.79				11.58	Zinc Sulfide			
29	Use pH measured at											
30	STP to calculate SI?	1-Yes,0-No	0					0	Calcium fluoride			
31	Gas/day(thousand cf/day)	(Mcf/D)	329					329				
32	Oil/Day	(B/D)	0					0	Iron Carbonate			
33	Water/Day	(B/D)	45					45	1.87	1.76	-0.11	
34	For mixed brines, enter values for temperatures and pressures							(ENTER H35-H39)	Inhibitor needed (mg/L)			
35	Initial T (BH)	(F)	65.0					340.0	Calcite	NTMP		
36	Final T (WH)	(F)	65.0					77.0	0.00	0.00		
37	Initial P (BH)	(psia)	100.0					7,000.0	Barite	BHPMP		
38	Final P (WH)	(psia)	100.0					15.0	0.77	0.88		
39	Use TP on Calcite sheet?	1-Yes,0-No	1	0	0	0	0	0	pH			
40									7.07	6.91		
41	API Oil Grav.	API grav.						30.00	Viscosity (CentiPoise)			
42	Gas Sp.Grav.:	Sp.Grav.						0.60	0.897	0.840		
43	MeOH/Day	(B/D)						0	Heat Capacity (cal/ml/°C)			
44	MEG/Day	(B/D)						0	0.993	0.992		
45	SiO2	(mg/l) SiO2						0.00	Inhibitor needed (mg/L)			
46	Pb^{2+}	(mg/l)						0.00	Gypsum	HDTMP		
47	Br^-	(mg/l)						0.00	0.00	0.00		
48	Conc. Multiplier		1	1	1	1	1	1	Anhydirte	HDTMP		
49									0.00	0.00		
50	Quality Control Checks at STP:		Click here to run the following quality control checks on the input data, above.									
51	H_2S Gas	(%)										
52	Total H2Saq (STP)	(mgH2S/l)										
53	pH Calculated	(pH)										
54	PCO2 Calculated	(%)										
55	Alkalinity Caclulated	mg/l) as HCO3										
56	ΣCations=	(equiv./l)										
57	ΣAnions=	(equiv./l)										
58	Calc TDS=	(mg/l)										

59	Inhibitor Selection	Input	Unit	#	Inhibitor	Unit Converter (From metric to English)			
60	Protection Time	120	min	1	NTMP	From Unit	Value	To Unit	Value
61	Have ScaleSoftPitzer			2	BHPMP	°C	100	°F	212
62	pick inhibitor for you?	0	1-Yes,0-No	3	PAA	m^3	100	ft^3	3,531
63	If No, inhibitor # is:		#	4	DTPMP	m^3	100	bbl(42 US gal)	629
64	If you select Mixed,			5	PPCA	MPa	1,000	psia	145,074
65	1st inhibitor # is:	1	#	6	SPA	Bar	100	psia	1,450
66	% of 1st inhibitor is:	50	%	7	HEDP	Torr	10,000	psia	193
67	2nd inhibitor # is:	2	#	8	HDTMP	Gal	10,000	bbl(42 US gal)	238
68	Display act. coefs?	0	1-Yes,0-No	9	Average	Liters	10,000	bbl(42 US gal)	63
69				10	Mixed				

70 * Concentrations are in mg/L of brine (except methanol and MEG, which are in units of barrels per day, the same as the water and oil)

November 2, 2011

Mr. Robert Ballou
Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066

Re: Integrated Water Management Facility
Waste Water Injection Well
Duchesne, Utah

Dear Mr. Ballou,

In accordance with your request, we have prepared this addendum to the hydrologic study dated September 21, 2011 of the Integrated Water Management (IWM) disposal well located in Section 30, Township 2 South, Range 4 West, Uintah Special Meridian. The hydrologic study was conducted to address concerns raised by the Utah Division of Oil, Gas and Mining (UDOGM) regarding the IWM disposal well. UDOGM had expressed the concern that waste water injection in the IWM well may create a conduit that could enable fluids to migrate up or down the wellbore of a nearby gas production well, and enter improper intervals.

The purpose of the previous hydrologic study was to address this concern by constructing a three-dimensional groundwater flow model to simulate the effects on the nearby gas production well in question due to waste water injection in the IWM disposal well over a period of 100 years. Assumptions made in the groundwater flow model included completely saturated conditions and an average porosity of 15 percent. However, additional information has become available that indicates that the zone of injection for the IWM well is not saturated. Mr. Shawn Moulton of Halliburton was contracted to analyze geophysical data from the IWM well using SASHA Water Saturation Analysis V2 software to assess the degree of saturation within perforated intervals. While installing the IWM well, a total of 180 feet of perforations were created within highly conductive zones between 4063 and 5130 feet below ground surface. Mr. Moulton indicated that water saturation in the perforated zones of the IWM well range between 25 and 50 percent, and average approximately 30 percent saturation.

Unfortunately, the three-dimensional groundwater flow model constructed for the site using Visual MODFLOW cannot be modified to less than 100 percent saturation conditions. Therefore, a few calculations were made to estimate the time period during which all void spaces in the perforated interval would be filled to 100 percent saturated conditions. These calculations are included in Appendix A to this document.

6084 South 900 East • STE. 102 • Murray, Utah 84121 • Office: 801-506-0651 • Fax: 801-506-0654

FINDINGS

Assuming 5,000 barrels of waste water will be injected into the IWM well per day, 360 days per year, the estimated time to fill all pore spaces within ¼-mile of the 180-foot perforated interval of the IWM well would be approximately 10.4 years. If the area of review is extended to 1,650 feet from the IWM well, which is the distance to the 1-31 B4 well, then the estimated time to fill all pore spaces would increase to approximately 16.3 years.

Our services consist of professional opinions and recommendations made in accordance with generally accepted environmental principles and practices at the time of execution. This warranty is in lieu of all other warranties either expressed or implied.

Should you have any questions, please do not hesitate to contact us.

Sincerely,
GRANITE ENVIRONMENTAL, INC.

Rebecca Gustin, P.G.
Senior Geologist

6084 South 900 East • STE. 102 • Murray, Utah 84121 • Office: 801-506-0651 • Fax: 801-506-0654

APPENDIX A

Pore Space Calculations

Assumptions made for calculating the time to fill the pore spaces around the IWM well:

1. Two areas of review will be considered. The first is the ¼-mile distance designated by the EPA for impacts due to injected water. The second is the distance to the 1-31 B4 well, which is 1,650 feet from the IWM well.
2. The average porosity of the formation is approximately 15 percent.
3. The average water saturation in the pores of the formation is approximately 30 percent. Therefore 70 percent of the pore space in the formation is available for water input.
4. Between the interval of 4063 and 5130 feet below ground surface, 180 feet of perforations have been installed in the IWM injection well. Calculations of volume will include only the perforated intervals.
5. The injection rate for the IWM well will be 5,000 barrels per day for 360 days per year.

Calculations for ¼-mile area of review

Volume of formation (V) considered:

$$V = \pi R^2 H$$

where R = radius of review = 1,520 ft
H = height of perforated intervals = 180 ft

$$V = 9.84\ x\ 10^8\ ft^3$$

Available pore space within the formation within the volume in question is assumed to be 15 percent. Therefore, the available volume for fluids (V_a) within the formation is calculated to be:

$$V_a = 0.15\ (9.84\ x\ 10^8\ ft^3) =\ 1.48\ x\ 10^8\ ft^3$$

If 30 percent of the pore spaces are already occupied by groundwater, as indicated in the geophysical logs from the IWM well, then 70 percent of the pore spaces are available for fluid injection. Therefore, the available volume for injected fluids (V_i) within the formation is calculated to be:

$$V_i = 0.70\ (1.48\ x\ 10^8\ ft^3) =\ 1.03\ x\ 10^8\ ft^3$$

The available volume for injected fluids (V_i) in terms of barrels, given that there are 5.5 ft^3 in one barrel, is then given as:

$$V_i = (1.03\ x\ 10^8\ ft^3)\frac{1\ barrel}{5.5\ ft^3} = 1.88\ x\ 10^7\ barrels$$

Given an injection rate of 5,000 barrels per day, 360 days per year, the time ($T_{1,520\ ft}$) to fill all available pore spaces within ¼-mile of the IWM well is given as:

$$T_{1,520\ ft} = (1.88\ x\ 10^7\ barrels)\left(\frac{day}{5{,}000\ barrels}\right)\left(\frac{year}{360\ days}\right) = 10.4\ years$$

Similarly, if the area of review were increased to 1,650 feet, the time ($T_{1,650\ ft}$) to fill all available pore spaces within the area of review is given as:

$$T_{1,650\ ft} = 16.3\ years$$

6084 South 900 East • STE. 102 • Murray, Utah 84121 • Office: 801-506-0651 • Fax: 801-506-0654

GRANITE ENVIRONMENTAL INC.

October 6, 2011

Mr. Robert Ballou
Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066

Re: Addendum to Hydrologic Study
Integrated Water Management Facility
Waste Water Injection Well
Duchesne, Utah

Dear Mr. Ballou,

In accordance with your request, we have prepared this addendum to the hydrologic study of the Integrated Water Management (IWM) disposal well located in Section 30, Township 2 South, Range 4 West, Uintah Special Meridian, to address concerns raised by the Utah Division of Oil, Gas and Mining (UDOGM) regarding the IWM disposal well. Rebecca Gustin, P.G. of Granite Environmental spoke with Mr. Dan Jarvis of UDOGM on September 22, 2011 regarding the hydrologic study dated September 21, 2011. Mr. Jarvis had two questions that he needed clarified with regard to the hydrologic study.

First, Mr. Jarvis asked what the pumping pressure was for the modeled injection well in the hydrologic study. In the Visual MODFLOW software, only pumping rate is considered when modeling groundwater flow around an injection well. However, the pumping rate is directly related to the pumping pressure. For example, if pumping pressure were decreased in an injection well, the pumping rate would correspondingly decrease. Therefore, if pumping pressure were increased or decreased, pumping rate would increase or decrease, and the corresponding groundwater flow around the injection well would change.

Second, Mr. Jarvis expressed concerns that injected water from the IWM injection well could potentially reach the uncemented interval of the 7-inch casing in the 1-31 B4 well, and travel down the outside of the casing and enter improper intervals. In this hydrologic model, it has been assumed that the geological formations are saturated with water beginning at a depth of 800 feet below ground surface (bgs). Therefore the borehole outside the uncemented region of the 7-inch casing in the 1-31 B4 well between 4519 ft bgs and 6899 feet bgs is likely filled with water. If injected water from the IWM well reaches the uncemented region of the 7-inch casing of 1-31 B4 well it will encounter formation groundwater. The only way that the injected water could travel downward would be if there was a significant density difference between the injected water and the surrounding groundwater. In other words, the injected groundwater would have to be significantly more saline, with corresponding higher

density, than the existing groundwater in order to have downward flow of the injected water around the 1-31 B4 well.

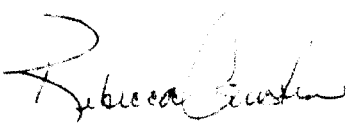
CONCLUSIONS

It is our opinion that the waste water injection activities at the IWM well will minimally impact the 1-31 B4 well. As stated in the hydrologic report of September 21, 2011, the pressure head in the 1-31 B4 well will be slightly increased by the injection activities, but the pressure head is not high enough to overcome the weight of the water column between the 7-inch and the 9-5/8-inch casings from 4519 feet bgs up to 2301 feet bgs. The modeled injection rate was 210,000 gallons per day, and if injection pressure were to change, the corresponding injection rate would change, and corresponding heads would change in the groundwater around the injection well. In addition, injected water from the IWM well is unlikely to travel down the outside of the 7-inch casing because there is no significant density difference between the injected water and existing groundwater in the region.

Our services consist of professional opinions and recommendations made in accordance with generally accepted environmental principles and practices at the time of execution. This warranty is in lieu of all other warranties either expressed or implied.

Should you have any questions, please do not hesitate to contact us.

Sincerely,
GRANITE ENVIRONMENTAL, INC.



Rebecca Gustin, P.G.
Senior Geologist

September 21, 2011

Mr. Robert Ballou
Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066

Re: Integrated Water Management Facility
Waste Water Injection Well
Duchesne, Utah

Dear Mr. Ballou,

In accordance with your request, we have prepared this hydrologic study of the Integrated Water Management (IWM) disposal well located in Section 30, Township 2 South, Range 4 West, Uintah Special Meridian, to address concerns raised by the Utah Division of Oil, Gas and Mining (UDOGM) regarding the IWM disposal well. UDOGM has expressed the concern that waste water injection in the IWM well may create a conduit that could enable fluids to migrate up or down the wellbore of a nearby gas production well, and enter improper intervals. The purpose of this hydrologic study is to address this concern by constructing a three-dimensional groundwater flow model to simulate the effects on the nearby gas production well in question due to waste water injection in the IWM disposal well over a period of 100 years.

BACKGROUND

According to the information that you have supplied to us, the IWM disposal well has been constructed with perforated intervals between 4068 feet below ground surface (bgs) and 5130 feet bgs, and planned injection rates will range between 3000 and to 5000 barrels per day.

Also, it is our understanding that the nearby gas production well (1-31 B4) is located approximately 1650 feet south of the IWM well. The 1-31 B4 well was constructed in the early 1970s with a 4-1/2-inch production liner from 9384 feet bgs to 12,400 ft bgs, a 7-inch casing from the surface to 10,062 feet bgs that is cemented from 6899 feet bgs to 10,062 feet bgs, and a 9-5/8-inch casing from the surface to 4519 feet bgs, with cement between 2301 feet bgs and 4519 feet bgs. Figure 1 depicts the construction of the 1-31 B4 well.

UDOGM has noted that there is no cement between the 7-inch and the 9-5/8-inch casing from 4519 feet bgs to 6899 feet bgs, and waste water will be injected from the IWM well within this interval. The concern is that waste water from the IWM well could migrate to the 1-31 B4 well, enter the annulus between the 7-inch and the 9-5/8-inch casings, and be pushed up to the top of the cemented interval of the 9-5/8-inch casing (2301 feet bgs). If the waste water is able to migrate into this interval, then the

concern is that waste water may enter into the surrounding formation through any holes that might potentially be present in the 9-5/8-inch casing.

Therefore, we have constructed a three-dimensional groundwater flow model to show whether the injection activities at the IWM well could potentially raise the hydraulic head at the 1-31 B4 well enough to allow waste water to travel from the bottom to the top of the cemented interval of the 9-5/8-inch casing, a vertical distance of 2218 feet.

REGIONAL HYDROGEOLOGY

According to United States Geological Survey Groundwater Atlas of the United States (1995), the region is underlain by an unconfined aquifer approximately 800 feet bgs, with groundwater flow generally north-northeast with a gradient of approximately 0.008 ft/ft. According to Picard (1959), regional stratigraphy consists of the Duchesne River Formation at the surface, underlain by the Uinta Formation, and then the Green River Formation. All three formations were formed in fluvial and lacustrine environments, and are characterized by alternating beds of shale, limestone and dolomite, and sandstone and siltstone.

HYDROLOGIC MODEL

A mathematical groundwater flow model of the region around the IWM and 1-31 B4 wells was constructed using Visual MODFLOW 2010.1, a three-dimensional finite difference groundwater model. In this model the MODFLOW-2005 groundwater flow engine with the WHS Solver package (pre-conditioned conjugate gradient stabilized) by Waterloo Hydrologic was used to model the groundwater flow. The region was modeled as a 10,000-foot by 10,000-foot area, centered on the IWM injection well. A 200-foot by 200-foot grid was constructed on top of the model to discretize the modeling domain for the numerical simulation.

Physical model parameters used on the MODFLOW numerical model include hydraulic conductivity, porosity, effective porosity, and specific yield:

- An average hydraulic conductivity of 1 gallon/day/ft^2 was chosen based on recommended ranges of hydraulic conductivity for sandstone presented in Freeze and Cherry, 1979. Hydraulic conductivity was assumed to be isotropic in the horizontal direction and anisotropic in the vertical direction, such that $K_x = K_y = 0.1\ K_z$. Of note, we made a conservative assumption that the aquifer in question was made of homogeneous sandstone, with uniform physical model parameters. In reality, the aquifer consists of interbedded lower conductivity materials (shale, siltstone), and higher conductivity materials (sandstone).

- Porosity was assumed to be 15%, based upon your recommendations.

- Effective porosity was also assumed to be 15%, giving a conservative estimate.

- Specific yield, which is roughly equivalent to the effective porosity in an unconfined aquifer, was assumed to be 15%.

Groundwater flow boundary conditions were created for the model using constant head boundaries on the north and south sides of the model, creating a south to north groundwater flow regime located approximately 800 feet bgs with a horizontal gradient of approximately 0.008 ft/ft and no vertical gradient.

The IWM injection well was modeled by creating a pumping well with screened interval from 4068 feet bgs to 5130 feet bgs. The injection rate was held steady at 5000 barrels per day (210,000 gallons per day) for 100 years.

FINDINGS

The results of the model are presented in Figures 2 through 4 of this report. Figure 2 presents the results of the model in map view, at a depth of 4500 feet bgs (bottom of the cemented interval of the 9-5/8-inch casing of the 1-31 B4 well). An increase in hydraulic head of approximately 400 feet is observed at the injection well, and approximately 100 feet at the 1-31 B4 well. Figure 3 presents the results of the model in map view at a depth of approximately 2300 feet bgs, which corresponds to the top of the cemented interval of the 9-5/8-inch casing of the 1-31 B4 well. An increase in hydraulic head of approximately 11 feet is observed at the injection well, and approximately 2 feet at the 1-31 B4 well. This indicates that the increase in hydraulic head from injection activities results in an increase in the pressure head at the two wells, but not a significant increase in elevation head at the top of the cemented interval of the 9-5/8-inch casing of the 1-31 B4 well.

Figure 4 presents the results of the model in a north-south cross-sectional view.

CONCLUSIONS

It is our opinion that the waste water injection activities at the IWM well will minimally impact the 1-31 B4 well. The pressure head in the 1-31 B4 well will be increased slightly by the injection activities, but the pressure head is not high enough to overcome the weight of the water column between the 7-inch and the 9-5/8-inch casings from 4519 feet bgs up to 2301 feet bgs. Therefore waste water is very unlikely to migrate up the wellbore of the 1-31 B4 well, and enter an improper interval.

REFERENCES

Robson, S.G. and Banta, E.R., USGS Groundwater Atlas of the United States; Arizona, Colorado, New Mexico and Utah, USGS Publication HA 730-C, 1995.

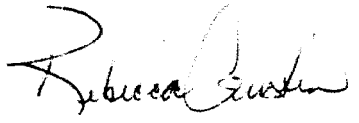
Picard, M. Dane, Green River and Lower Uinta Formation Subsurface Stratigraphy in Western Uinta Basin, Utah, Intermountain Association of Petroleum Geologists, 1959.

Freeze, R. Allan, Cherry, John A., Groundwater, Prentice-Hall, Inc., 1979.

Our services consist of professional opinions and recommendations made in accordance with generally accepted environmental principles and practices at the time of execution. This warranty is in lieu of all other warranties either expressed or implied.

Should you have any questions, please do not hesitate to contact us.

Sincerely,
GRANITE ENVIRONMENTAL, INC.



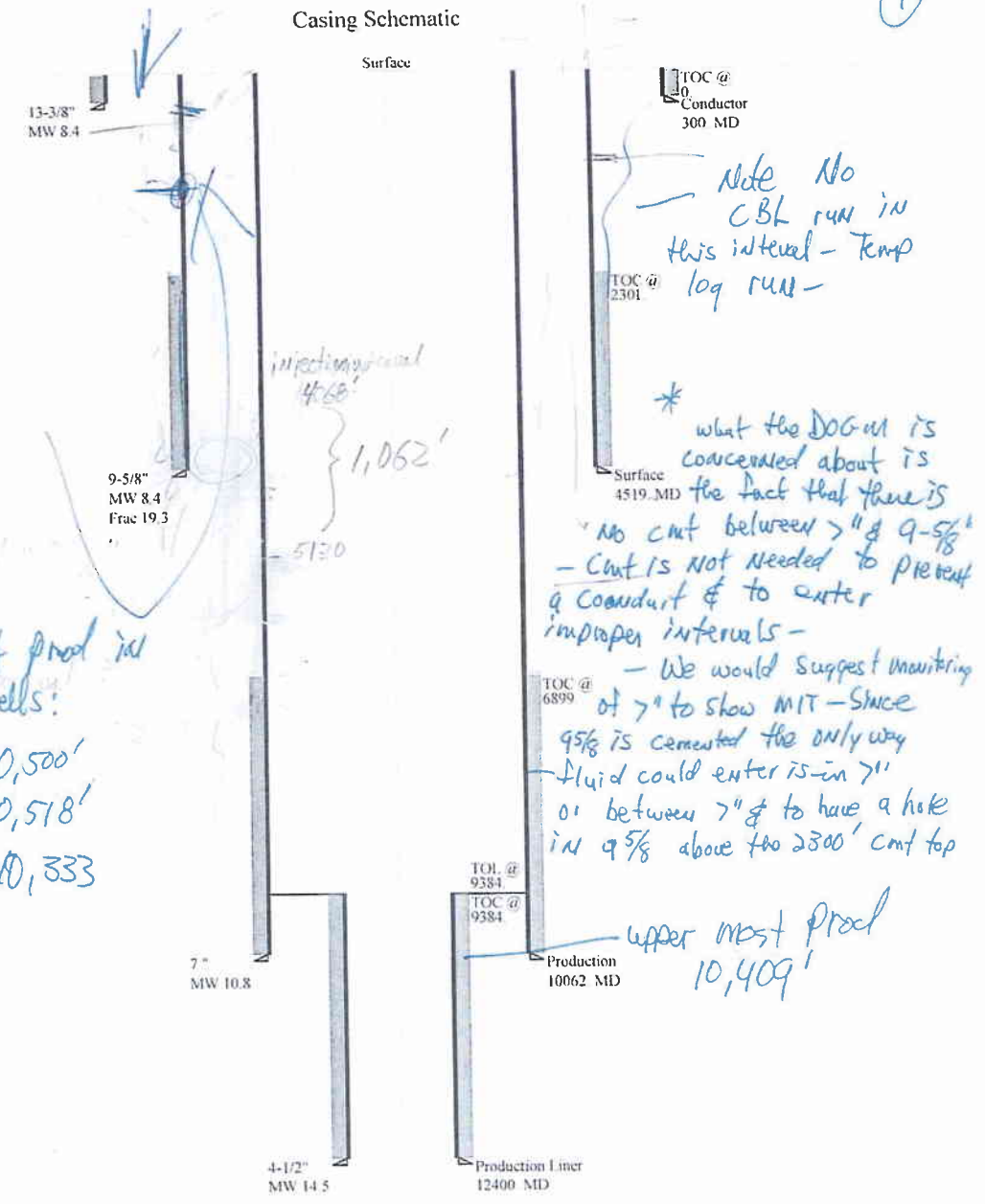
Rebecca Gustin, P.G.
Senior Geologist

6084 South 900 East • STE. 102 • Murray, Utah 84121 • Office: 801-506-0651 • Fax: 801-506-0654

43013301980000 Christman-Bland compl

Casing Schematic

(1)



Note No CBL run in this interval - Temp log run -

* what the DOGM is concerned about is the fact that there is no cmt between 7" & 9-5/8" - Cmt is not needed to prevent a conduit & to enter improper intervals -

- We would suggest monitoring of 7" to show MIT - Since 9 5/8 is cemented the only way fluid could enter is - in 7" or between 7" & to have a hole in 9 5/8 above the 2300' cmt top

upper most prod 10,409'

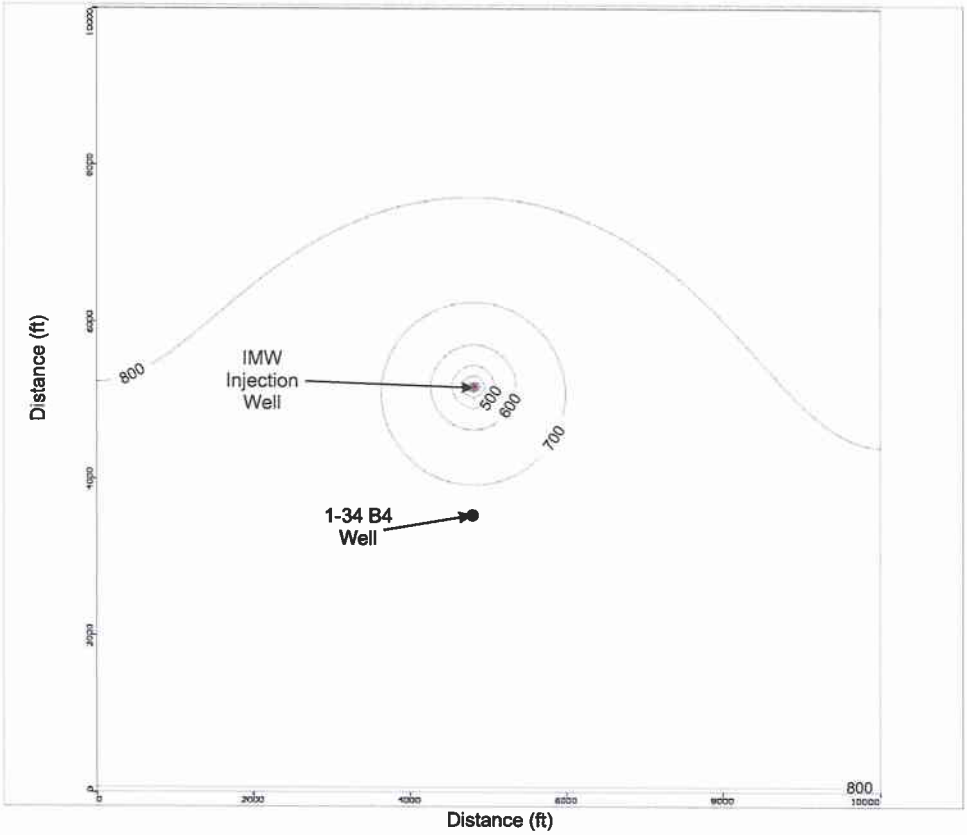
upper most prod in Adjacent wells:

1-27 B4 - 10,500'
1-28 B4 - 10,518'
1-30 B4 - 10,333

prepared by Ammon McDonald of DOGM

GRANITE ENVIRONMENTAL INC.	1-31 B4 Well Construction Integrated Waste Management Facility Waste Water Injection Well Duchesne, UT	
	PROJECT NO.	DATE: Sept 21, 2011
		FIGURE 1

Potentiometric Surface Map, 4500 Ft BGS



GRANITE ENVIRONMENTAL INC.

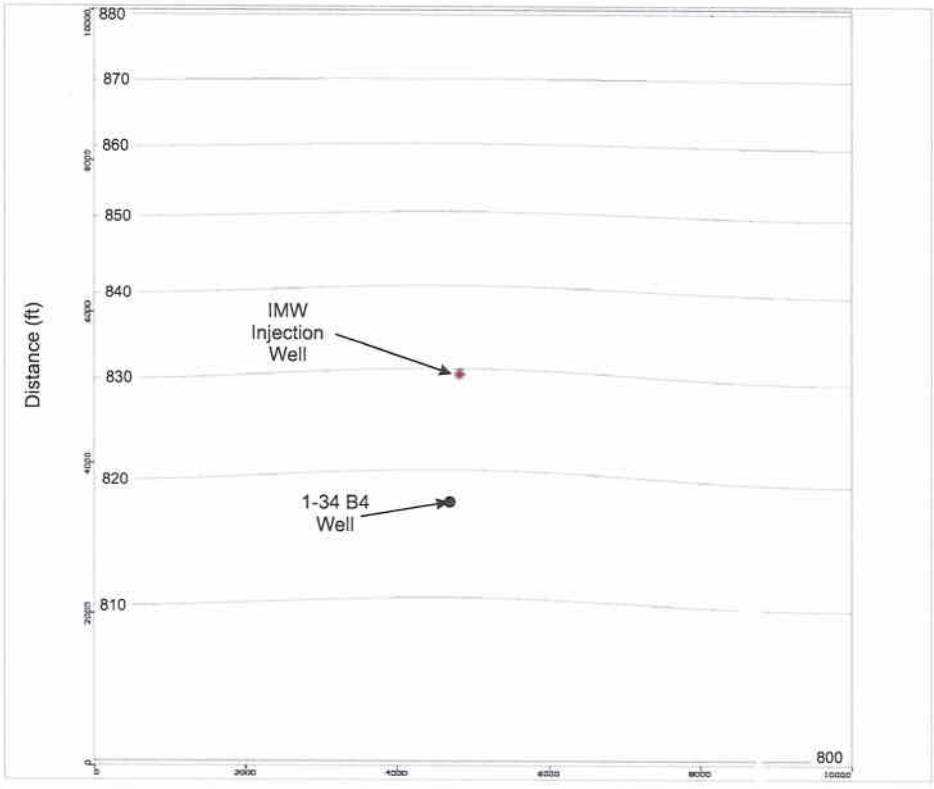
APPROXIMATE SCALE (ft.)

0 1800 3600

N W E S

Potentiometric Surface Map		
Integrated Water Management Facility Waste Water Injection Well Duchesne, UT		
PROJECT NO.	DATE Sept 21, 2011	FIGURE 2

Potentiometric Surface Map, 2300 Ft BGS



GRANITE ENVIRONMENTAL INC.

APPROXIMATE SCALE (ft.)

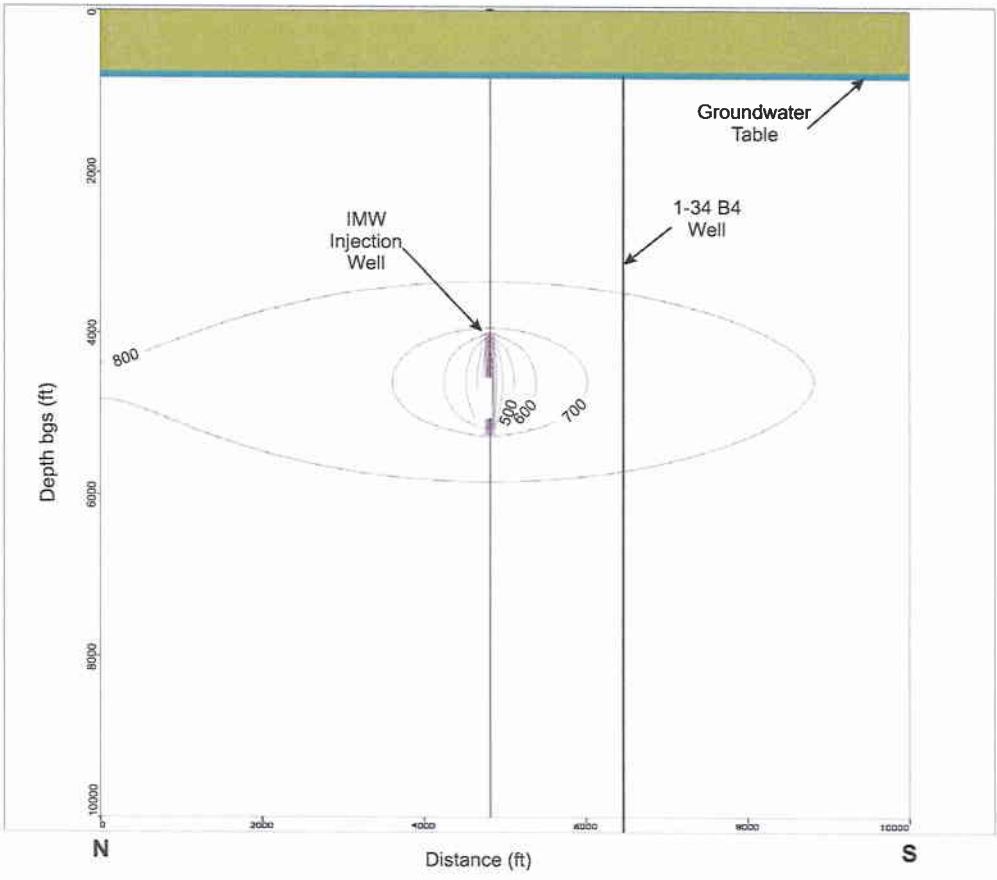
0 1800 3600

N W E S

Potentiometric Surface Map

Integrated Water Management Facility
Waste Water Injection Well
Duchesne, UT

PROJECT NO.	DATE	FIGURE 3
	Sept 21, 2011	



GRANITE ENVIRONMENTAL INC.

APPROXIMATE SCALE (ft.)

0 1800 3600

North-South Cross-Section

Integrated Water Management Facility
Waste Water Injection Well
Duchesne, UT

PROJECT NO.	DATE	FIGURE 4
	Sept 21, 2011	

Rebecca Brown-Gustin, E.I.T., P.G.

923 West 650 South
Heber City, Utah 84032
435-714-0424

Education

M.S. Geological Engineering, University of Idaho, in progress, December 2011
M.S. Hydrogeology, New Mexico Institute of Mining and Technology, 1992
B.S. Geology, New Mexico Institute of Mining and Technology, 1990

Registration

Professional Geologist: Utah #5505561-2250
Engineer-In-Training: Utah

Certifications

Utah Certified Underground Storage Tank Consultant #CC0219
Utah Certified Soil and Groundwater Sampler #GS1523
OSHA 40-Hour Hazardous Materials Operation
OSHA 8-Hour Hazardous Materials Supervisor
OSHA 8-Hour Refresher, March 2010

Professional Courses

Applied Groundwater Flow and Contaminant Transport Modeling, Schlumberger Water Services
Groundwater Pollution and Hydrology Course, Princeton Groundwater, Inc.
The Remediation Course, Princeton Groundwater, Inc.
Contaminant Chemistry and Transport Workshop Series, Northwest Environmental Training Center
Monitored Natural Attenuation of Petroleum and Chlorinated Hydrocarbons In Soil and Groundwater, Northwest Environmental Training Center
ASTM Environmental Site Assessments for Commercial Real Estate

Experience

Ms. Gustin has been a practicing hydrogeologist for 12 years. She has performed Phase I and Phase II Environmental Site Assessments, conducted soil and groundwater monitoring, and written feasibility studies and remedial action plans. She has participated in remediation design and implementation for several petroleum and chlorinated solvent impacted sites. Ms. Gustin has also constructed groundwater flow and solute transport numerical models using a variety of modeling codes including Visual MODFLOW, MODPATH, MT3D, RT3D, BIOCHLOR, and VLEACH.

Project Management

Ms. Gustin has been responsible for project management of personnel and budgets for environmental projects ranging from $1000 up to $500,000. As the owner of two small businesses between 1997 and 2009, Ms. Gustin has been responsible for all business aspects of the companies including marketing, client relations, job proposals, project cost accounting, company financial planning, general accounting, payroll, corporate tax preparation, contractor licensing, and insurance.

Environmental Due Diligence

Ms. Gustin has performed many Phase I Environmental Site Assessments (ESAs) and Transaction Screens on properties ranging from vacant land to heavy industrial complexes. The Phase I ESAs were conducted in general accordance with the scope and limitations of the *Standard Practice for Environmental Site Assessments: Phase I Site Environmental Site Assessment Process* as presented in ASTM E 1527-05.

Site Investigations

Private Client, Site Investigation: Ms. Gustin conducted several site investigations at an oil refinery in Woods Cross, Utah. Site investigations began with a Phase II ESA designed to detect any potential impacts to soil and groundwater resulting from oil refining operations and from past use of the property to store hazardous materials. When petroleum product and solvent impacts were discovered, further site investigations were conducted to characterize the horizontal and vertical extent of soil and groundwater impacts. Approximately 4,000 cubic feet of heavily impacted soil was removed from the site, and a sparge well was installed to remediate remaining impacted groundwater from the excavation site.

State of Utah School and Institutional Trust Lands Administration, Site Investigation: Ms. Gustin performed a Phase II ESA on a SITLA property in Saratoga Springs, Utah that was formerly leased to a company that manufactured explosive materials that were sold to mining companies. The investigation included a detailed ground penetrating radar (GPR) survey to locate possible buried debris, excavation and sampling of soils in areas of GPR anomalies, and drilling with continuous soil sampling in areas where explosive mixtures were reportedly disposed.

Feasibility Studies and Remediation

Private Client, Feasibility Study: Ms. Gustin conducted a feasibility study of a laundry facility in Salt Lake City, Utah that had formerly been used as a dry cleaner. Extensive tetrachloroethene (PCE) impacts to soil and groundwater were discovered at two locations at the facility. Challenges were encountered when contemplating possible remedial strategies for this facility because impacted soil and groundwater are located beneath occupied buildings, and because soils beneath the facility are composed of silt and clay with low hydraulic conductivities. After an exhaustive search for innovative remediation technologies for solvent-impacted low conductivity soils, Ms. Gustin concluded that thermal remediation of the site was the best remedial technology to address the impacted soil and groundwater at the site.

Farmington Junior High School, Remediation: Ms. Gustin directed the remediation of fuel oil-impacted soils and groundwater from an area adjacent to the Farmington Junior High School in Farmington, Utah. The source of the fuel oil was from storage tanks and pipelines that formerly supplied fuel oil to boilers at a plant nursery that occupied the property before the school was constructed. Remediation activities included excavation of impacted soils, pumping of impacted groundwater while excavation activities proceeded, and final treatment of impacted groundwater using amendments to augment the biodegradation of the petroleum products. Ms. Gustin subsequently directed activities to install monitoring wells around the school, and to investigate possible vapor intrusion issues into the school.

Groundwater Fate and Transport Modeling

Private Client, Groundwater Fate and Transport Model: Ms. Gustin constructed a three-dimensional groundwater flow and contaminant fate and transport model using Visual MODFLOW of a facility with two areas of PCE impacts to soil and groundwater resulting from past dry cleaning activities. The model was used to estimate the stability of the contaminant plumes, predict future pathways of contaminant migration, and was used as a tool in a feasibility study to evaluate the effectiveness of different remedial strategies.

Private Client, Vadose Zone Transport Model: Ms. Gustin constructed a vadose zone leaching model using the VLEACH program to estimate the impact on underlying groundwater resources due to the mobilization and migration of a sorbed organic contaminant located in the vadose zone. For this project, PCE was detected at very high concentrations next to a dry cleaning facility that was located approximately 70 feet above the groundwater table. Subsurface soils consisted of interbedded silty sand and cobble, and isolated, intermittent clay layers that acted as aquitards to the flow of PCE down towards the groundwater table. The conclusion to the transport model was that expected concentrations of PCE in groundwater at the groundwater table were well below Maximum Contaminant Levels, and therefore impacted soils remaining next to the dry cleaner facility would not significantly degrade groundwater. The facility received regulatory closure from the State of Utah in the spring of 2010.

Underground Storage Tank Consulting

Ms. Gustin has been a UST Consultant for several gas stations throughout Utah. UST Consultant duties have included interfacing with the State of Utah Division of Environmental Response and Remediation project managers, conducting site investigations to assess the extent of soil and groundwater impacts from spills or leaking USTs, preparing corrective action plans for sites requiring remediation, and preparing closure documents. Remediation techniques that Ms. Gustin has used at UST sites have included free product removal, excavation, air sparing, soil vapor extraction, bioventing and biosparging, and monitored natural attenuation. Ms. Gustin has also assisted in the removal of several USTs, and facilitated the subsequent closure of these sites.

Employment History

2010 – present	Granite Environmental, Inc. *Senior Geologist/Project Manager*	Salt Lake City, Utah
2006 – 2010	Wasatch Environmental, Inc. *Project Hydrogeologist/Project Manager*	Salt Lake City, Utah
2004 – 2009	Performance Drilling, Inc. *Owner, Geologist*	Salt Lake City, Utah
1999 – 2000	Masson & Associates *AutoCAD Designer*	Escondido, California
1997 – 2004	Gustin Transcription Services *Owner, Lead Medical Transcriptionist*	Albuquerque, New Mexico
1992 – 1997	Golder Associates, Inc. *Staff and Project Hydrogeologist*	Los Alamos, New Mexico
1992	Los Alamos National Laboratory *Intern Hydrogeologist*	Los Alamos, New Mexico
1991	Oak Ridge National Laboratory *Intern Hydrogeologist*	Oak Ridge, Tennessee

Memberships

Utah Geological Association (UGA) – Board member 2008-2010
American Society for Testing and Materials (ASTM) – D18 Subcommittee
National Ground Water Association (NGWA)
American Society for Civil Engineers (ASCE)

Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066
Office 435-722-3555 Fax 435-722-3556 Cell 435-724-2500
rballou@stratanet.com
August 29, 2011

RE: Christman Bland 1-31 B4/IWM SWD 3-30B4

Brad/Ammon:

Over the weekend I happened to have the opportunity to have an extended visit with Gary Lamb of El Paso. Gary is the individual that provided me the Cement Bond Logs for the two wells in the proximity of our SWD well. He also provided to me the use of the complete well file and all of the available logs of the 1-31 B4.

We discussed the current situation and he suggested that considering the distance from the wells, the current state of the well bore and that the 1-31 was up dip to the IWM SWD well that there was very slim possibility that production water would ever even come in contact with the 7" casing of the 1-31 B4. Additionally, even if it did the only way it would have an avenue of travel would be if a hole developed in the 7" casing (and if this happened El Paso would know that).

Considering that the situation he considers is a non problem he suggested that if and when a hole develops in the 7" that would allow production water to enter into the 7", that at that time El Paso would pull the production tubing, appropriate wire line tools would be run to determine the location of the hole and a squeeze job would be done at that time. At that time IWM would be willing to cover the costs of that operation.

Incidentally El Paso in anxious for us to have the SWD well in operation as they are a customer of IWM and we have had to deny them access to our facility until we can handle the fluid.

Update on what our efforts have been:

- I have met with an individual, (Lynn Monson who currently works for Newfield Production) that does all of Newfield's step rate tests. We have arranged for him to help us on a consulting basins next Saturday to run a step rate test and a MIT test.

- I have provided data to John Wood of Civco Engineering on the Pro Water objection. He reviewed my data and he provided me a document wherein he states that he concurs with my calculations regarding the impact (or lack of) on the Blue Bench Facility.

- We have had Central Hydraulic build a Tri Plex pump and it is being set on a pad that has been poured.

- We poured a pad for the water holding tank and ordered the lines and pump.

- We have given out the job to construct a pump shack and have ordered the electronics.

We believe that IWM is an asset to the operators in the region. We know that with the addition of the SWD well (and the oil processing equipment that was purchased last week and is being delivered this week) that we will have a facility that has taken the steps to deal with issues effecting the local operators, the County and the State.

IWM requests that with the completion of the MIT and the data obtained on the Step Rate Test that with the exception of the delaying tactics of Pro Water that IWM be given a permit to inject as a SWD facility.

Thank you for your consideration on this matter. I am available to come to Salt Lake or provide any other assistance.

Regards,

Bob Ballou

CIVCO Engineering, Inc.

Civil Engineering Consultants

PO Box 1758 * 1256 W 400 S, Suite 1

Vernal, Utah 84078

October 17, 2011

Robert Ballou
849 Canyon View Drive #416-3
Roosevelt, Utah 84066

Dear Mr. Ballou:

I have reviewed the data regarding the installation of a disposal well located at the Integrated Water Management (IWM) facility in Section 30, Township 2 South, Range 4 West, Uintah Special Meridian.

In my September 13, 2011 letter to you, I made the assumption that the injection zone was unconfined and unsaturated. I have reviewed Rebecca Gustin's hydrologic study in which she assumed unconfined and saturated conditions. The conclusions she reached are much more conservative than my own. However, the methodology she used was correct. I spoke with her and she agreed that if the zone is unsaturated the results would be much less conservative.

There is no cement seal in the annular space between the 9-5/8" casing and the 7" casing for Well 1-31 B4. The State of Utah, Division of Oil, Gas, and Mining (Division) is concerned with the possibility of the contaminants from the IWM injection well entering existing ground water at an improper interval through this conduit.

The bottom of the 9-5/8" casing for Well 1-31 B4 is at an elevation of approximately 1,381 feet above MSL. The IWM well is perforated at different intervals between 1,020 feet above MSL and 2,087 feet above MSL. These perforations are in the same elevation range as the Well 1-31B4 9" casing bottom. There are two conditions that would need to occur for the water from the IWM injection well to enter an improper interval.

The first condition is that the contaminants would have to migrate to Well 1-31 B4. All indications are that the IWM injection well is down gradient and possibly cross gradient from the Well 1-31 B4. Given this condition, the contaminants from IWM injection well would travel away from well 1-31B4.

Phone (435)789-5448 * Fax (435)789-4485
Email: civco@civcoengineering.com

CIVCO Engineering, Inc.

Civil Engineering Consultants

PO Box 1758 * 1256 W 400 S, Suite 1

Vernal, Utah 84078

The second condition is that an open conduit would exist for contaminants to migrate to an improper interval. The annular space between the 9-5/8" casing and the 7" casing of Well 1-31 B4 does not have a cement plug, thus forming a conduit. However, both casings are installed to the surface which forms a closed conduit. The 9-5/8" casing would have to have a catastrophic failure to form an open conduit. Also, in order for water to rise higher than that of the surrounding aquifer, the casing would have to penetrate a confined aquifer and would have to be sealed between the casing and the confining layer. This aquifer does not demonstrate characteristics of a confined aquifer. Given the nature of the aquifer, any failure of the casing within the aquifer would only equalize any differences of water elevation between that of the surrounding aquifer and any water in the annular space. The water injected at the IWM injection well would stay in the same aquifer it is injected into. The background water in this zone is generally considered to be brackish and is not fit for human consumption.

According to the model developed by Rebecca Gustin, under the worst case scenario, two feet of additional head could be developed at Well 1-31 B4 (approximately 1psi). This differential head would not be enough to move contaminants up the annular space at Well 1-31 B4. Volatile organic constituents are generally lighter than water and are the only constituents that are likely to move upwards from where they are injected. The water that is injected in the IWM well has been treated through three evaporation ponds prior to being injected. The average detention time for this will be between 178 days and 297 days. This is sufficient time for volatile organics to dissipate prior to injection. Any other contaminants would migrate with the hydraulic gradient and slightly down.

After reviewing the data, it is my opinion that the water injected into the IWM well will not affect Well 1-31 B4 well or adversely affect any other water bearing zones.

If you have any questions, please give me a phone call. Thank you.

John S. Wood, SE

PROFESSIONAL STRUCTURAL ENGINEER
No. 174630
JOHN SHANE WOOD
10-17-11
STATE OF UTAH

Phone (435)789-5448 * Fax (435)789-4485

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CIVCO Engineering, Inc.

Civil Engineering Consultants

PO Box 1758 * 1256 W 400 S, Suite 1

Vernal, Utah 84078

John S. Wood, SE

Education: 1986, BS, Civil Engineering, Brigham Young University
1987, MS, Civil Engineering w/emphasis in environmental engineering – hydrogeology, Brigham Young University

Experience: State of California, Regional Water Quality Control Board, Central Valley Region, Toxics and Groundwater Protection Unit, 1987-1988.

US Bureau of Land Management, Vernal Field Office, project over sight on leaking underground storage tank assessment and removal, 1990-1992.

US Bureau of Land Management, Vernal Field Office, reviewed a well drilling proposal by the USGS for a water well located in the Book Cliffs, 1993-1994.

US Bureau of Land Management, Vernal Field Office, Source Protection Plan review for Clay Basin, 1996.

US Forest Service, Ashley National Forest, Source Protection Plan review, 2002.

US Forest Service, Ashley National Forest, Upper Country Water District, Upper Cow Spring Development EA, team member responsible for hydrology and engineering review, 2002-2004.

Wood Engineering, Inc. production water disposal facility design and construction over sight for Brennan Bottom and Iowa Tank Lines, 2007-2009

CIVCO Engineering, Inc. production water disposal facility design and construction over sight for Iowa Tank Lines and Integrated Water Management, 2010-2011.

Phone (435)789-5448 * Fax (435)789-4485
Email: civco@civcoengineering.com

CIVCO Engineering, Inc.

Civil Engineering Consultants

PO Box 1758 * 1256 W 400 S, Suite 1

Vernal, Utah 84078

September 13, 2011

Robert Ballou
849 Canyon View Drive #416-3
Roosevelt, Utah 84066

Robert:

I have reviewed the data regarding the installation of a disposal well located at the Integrated Water Management facility in Section 30, Township 2 South, Range 4 West, Uintah Special Meridian.

In order for the casing to provide a conduit for contamination of aquifers, a failure of the casing would have to occur. The cement seals will prevent the conduit between the casings.

I performed my calculations to determine the possibility of the IWM well affecting the 1-31 B4 well located 1650 feet from the IWM well. Based on very conservative values, if there were no flow in the aquifer and the injected water filled the aquifer in a cylinder from the difference in the elevations of the aquifer levels at the wells, it would take 2,588 days to fill the voids of the aquifer.

I calculated the flow of water based on the hydraulic conductivity of 1 gal/day/ft^2 (K). The radius of influence with this K would be 200 feet. The capacity of the aquifer at 1650 foot radius would be 203,642 bbl/day. IWM will discharge an average of 3000 bbl/day.

These numbers demonstrate that the IWM will not affect the 1-31 B4 well.

If you have any questions, please give me a phone call. Thank you.

John S. Wood, SE

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SHEET NO.: 1 OF 2

DATE 9-12-11

PROJECT NO.: _____ LOCATION IWM Injection Well BY JSW

GIVEN: $R = 1650'$ $h = H_1 - H_2 = 68'$ POROSITY = 15%

HYDRAULIC CONDUCTIVITY $K = 10^{-5}$ cm/sec

RANGE FOR K SANDSTONE $\approx$ 1 gal/day/ft^2

10^{-8} cm/sec TO 10^{-3} cm/sec

1) CALCULATE STORAGE W/ NO FLOW

ASSUME A CYLINDER W/ 68' HEAD VERY CONSERVATIVE

$$V = 0.15\left(\pi R^2 h\right) = 0.15\left(\pi \frac{(1650')^2}{2} 68\right)$$

$$= 435,981.15 \text{ ft}^3$$

$$= 7,764,771 \text{ bbls}$$

@ 3000 bbl/d = **2,588 DAYS TO IMPACT WELL**

2) CALCULATE W/ FLOW

3000 AVE BBL/DAY

$Q = KA$

$A = \frac{Q}{K}$

$= \frac{3000 \text{ BBL/D} \times 42 \text{ gal/BBL}}{1 \text{ gal/d/ft}^2}$

$= 126000 \text{ ft}^2$

$A = \pi r^2$

$r = \sqrt{\frac{A}{\pi}}$

$= \sqrt{\frac{126000}{\pi}} = 200.26'$

$r = 200'$

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SHEET NO.: 2 OF 2

DATE 9-12-11

PROJECT NO.: _____ LOCATION IWM Injection Well BY JSW

3 CAPACITY OF AQUIFER W/O INTERFERING W/ EXISTING WELL

$A = \pi\ 1650^2$

$= 8,552,985\ ft^2$

$Q = KA$

$= 1\ gld/ft^2 \times 8,552,985\ ft^2 \times \frac{1\ bbl}{42\ g}$

$Q = 203,642\ bbl/DAY$ CAPACITY OF AQUIFER

THESE ARE ROUGH CACULATIONS BUT DEMONSTRATE THAT THE IWM WELL WILL HAVE NO IMPACT ON THE EXISTING WELL

LICENSED PROFESSIONAL ENGINEER
No. 174630
JOHN SHANE WOOD
STATE OF UTAH

PETERSON ENERGY
MANAGEMENT INC.
2154 West Eisenhower Boulevard | Loveland, Colorado 80537 | 970-669-7411 | info@petersonenergy.com
www.petersonenergy.com

October 14, 2011

Robert L. Ballou
Ballou Geologic Consulting
PO Box 816
Roosevelt, Utah 84066

Re: Integrated Water Management SWD 3-30 B4 Injection Well
Section 30, Township 2 South, Range 4 West, Uintah Special Meridian.

Dear Mr. Ballou:

Per your request, Peterson Energy Management, Inc. has reviewed a hydrology report prepared by Granite Environmental, Inc. on September 21, 2011; certain flow calculations prepared by John Wood of CIVCO Engineering dated September 13, 2011; and other relevant information that you supplied us, including well logs on the IWM SWD 3-30 B4 well. In addition we examined El Paso's Christman Bland 1-31 B4 electric log suite and well file as found on the UDOGM web site.

For illustrative purposes, we have constructed a well bore diagram showing both wellbores, which is attached. According to the structure map provided to us, the El Paso producing well is approximately 68 feet up dip from the injection well.

Facts highlighted in our findings:

1. The well bores are 1650 feet apart.

2. The sands being injected into are interbedded with shale stringers, thus confining the injected water into discrete sand lenses.

3. The depositional environment in the area of the two wells in question is lagunal or fluvial in nature and was not conducive to continuous, correlative, or extensive sand body deposition. The resulting lenticular sand lenses are small in aerial extent. The sands in the SWD 3-30 B4 well simply do not extend across the 1650' lateral length to the El Paso Christman Bland 1-31 B4 producing wellbore.

4. Even if some sands were to be continuous and present in both wellbores, according to Granite Environmental Inc.'s model, the energy developed in the injection process in the IMW SWD 3-

30-B4 well would only produce 2 feet of head at the Christman Bland 1-34-B4 producing well. This is insufficient to cause break out in the confining shale layers. Furthermore, this pressure is also insufficient to overcome the hydrostatic head in the annular space of the producing well, i.e. to drive fluids from a depth of 4519'up to the interval above cement top at 2300' in the Christman Bland 1-34 B4.

5. The Christman Bland 1-34 B4 produces from perforations below 10,400'. Regarding the interval of 4519' to 6899' in this well, there is no known hydrocarbon production from this interval in any well within a several miles radius of the producing Christman Bland 1-34 B4 well. Furthermore, a detailed review of mud logs in surrounding wells shows no evidence of any zones in the interval from 4519' to 6899' that could produce commercially. To produce from the uncemented interval in the Christman Bland 1-34 B4, El Paso have to perforate, cement squeeze and re-perforate, all to test an interval that has no evidence of hydrocarbons whatsoever. In our opinion there is no likelihood of this happening.

6. The surface casing in the Christman Bland 1-34 B4 was cemented from the 9 5/8" shoe at 4519' to a cement top of approximately 2300', as confirmed by a temperature log run after the cement job. In 1973 this was an acceptable method of determining top of cement. The maximum temperature at 4519' is estimated to be less than 150° F, based on observed temperatures in surrounding wells. Cement strength degradation is only thought to occur at temperatures above 200° F. As a result the surface casing job pumped in 1973 is, in our opinion, still providing adequate isolation and preventing fluid flow in the annular space of the Christman Bland 1-34 B4 well.

In our opinion, for the above reasons the water injected into the IWS SWD 3-30 B4 well will not reach to and will have no effect upon any interval in the Christman Bland 1-34-B4 well.

Respectfully submitted,

Peterson Energy Management, Inc.

Andy Peterson PE

Andy Peterson PE, President

Attachment

PETERSON ENERGY
MANAGEMENT INC.

2154 West Eisenhower Boulevard Loveland, Colorado 80537 970-669-7411 info@petersonenergy.com
www.petersonenergy.com

October 24, 2011

Mr. Robert Ballou
Ballou Geologic Consulting
P.O. Box 816
Roosevelt, Utah 84066

Re: Testimonials for Peterson Energy Management, Inc.

Dear Mr. Ballou:

Per your request, please find attached testimonials from a selection of our current clients. The word of our clients clearly demonstrates their confidence in Peterson Energy Management and their appreciation for the work we do.

Regards,

Chris Arnold
Business Development Manager
Peterson Energy Management, Inc.

Enclosure

PETERSON ENERGY
MANAGEMENT INC.

2154 West Eisenhower Boulevard Loveland, Colorado 80537 970-669-7411 info@petersonenergy.com
www.petersonenergy.com

Peterson Energy Management: Client Testimonials

"Peterson Energy Management has completed every well Sovereign Energy LLC has ever drilled, including all the drilling and completion activities of Colton LLC since Sovereign acquired Colton in 2006. Outsourcing this important component of our business to PEM has freed up our time to concentrate on business development and acquisitions. Sovereign and Colton rely upon PEM as if they were in-house."

—Thomas S. Metzger, Manager
Sovereign Energy LLC

"People make all the difference in the world. Peterson Energy has already found the best field supervisors, which means I don't have to spend time looking for quality people or dealing with the consequences of having hired the wrong ones."

—Tom Rogers, VP-Operations
Texas American Resources

"We run a tight ship here with a small staff, but I still need to get assistance from contractors. Peterson Energy personnel perform as if they are motivated employees – a quality connection that I intend to keep open."

—Kevin Brakovec, Drilling Engineer Lead - DJ Basin
Encana Oil & Gas

"No one wants to deal with excuses or non-motivated people. I really appreciate the positive, can-do attitude of Peterson Energy's wellsite supervisors."

—David Blandford, Partner
Matrix Energy, LLC

Peterson Energy Management has played a significant role in the execution of our drilling and completion programs in Colorado, Kansas, Wyoming and soon to be California. I would recommend their services to anyone, as a matter of fact I have already on more than one occasion.

Kevin Kane,
Operations Manager
Bayswater Exploration & Production, LLC

PETERSON ENERGY
MANAGEMENT INC.

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In the summer of 2010, Slawson Exploration Company, Inc. retained Peterson Energy Management to manage an exploration project in Weld Co., Colorado. Andy Peterson was given responsibility for the entire project, including the drilling and completion of the wells all the way through battery construction and the installation of artificial lift. With only a weekly phone call, we successfully drilled six wells under budget with minimal problems. Peterson communicated well, managed our project in a professional, efficient manner, and allowed us to develop that prospect without any significant drain on our resources. Peterson Energy Management not only met, but exceeded our expectations, and we would heartily recommend them to other Operators with similar needs.

Matt Houston
Operations Manager
Slawson Exploration Co., Inc.

Wellsite Supervision

- Drilling, completing and fracturing
  - Horizontal & Underbalanced
  - High-rate multistage fracturing
- Location construction
- Workover, maintenance and tank battery construction
- Frac flowback and well testing
- Operations management

Petroleum Engineering

- Well design:
  - Horizontal wells / high rate-high volume fracturing programs / injection and disposal wells
- AFEs, cost estimates and bid preparation
- Well performance optimization
- Drilling, production and reservoir engineering
- Facility design and construction
- Project review and analysis
- Specialized permitting: waterflood, EPA disposal wells and SPCC plans
- DFIT and pressure buildup test analysis
- Directional plan preparation
- Expert witness testimony

PETERSON ENERGY
MANAGEMENT INC

Current Clients: Drilling

- Bayswater Exploration: Weld, CO
- Bill Barrett Corp: Laramie, WY
- Blue Tip Energy Mgmt.: Carbon, UT
- Bonanza Creek: Jackson, CO
- CMO, Inc.: Kern, CA
- Dejour Energy: Rio Blanco, CO
- FIML Natural Resources: Scott, KS
- Genesis ST Operating: Rio Blanco, CO
- Great Plains Resources: Wichita, KS
- Gunnison Energy Corp: Gunnison, CO
- High Sierra Water Services: Weld, CO
- KP Kauffman: Weld, CO
- Recovery: Kimball, NE; Laramie, WY
- Resolute Energy Corp.: Washakie, WY
- Schlumberger Water Svcs: Logan, CO
- Synergy Resources Corp.: Weld, CO
- Weaver Boos: Roosevelt, MT
- Wellstar Corp: Laramie, WY

Current Clients: Completions

- Bayswater Exploration: Weld, CO
- Black Raven Energy: Morgan, CO
- Bonanza Creek: Jackson & Weld, CO
- Enerplus: Dunn, ND
- Foundation Energy: Weld, CO; Uintah, UT
- High Sierra Water Services: Weld, CO
- Kinder-Morgan: Cheyenne, NE
- KP Kauffman: Weld, CO
- Laramie Energy: Albany WY
- Matrix Energy: Weld, CO
- Mineral Resources, Inc.: Weld, CO
- Recovery: Laramie, WY
- Red Willow Production: Roosevelt, MT
- Schlumberger Water Svcs: Logan, CO
- Slawson Exploration: Weld, CO
- Synergy Resources: Weld, CO
- Wellstar Corp: Campbell, WY
- Whiting Petroleum: Johnson, WY

PETERSON ENERGY
MANAGEMENT INC

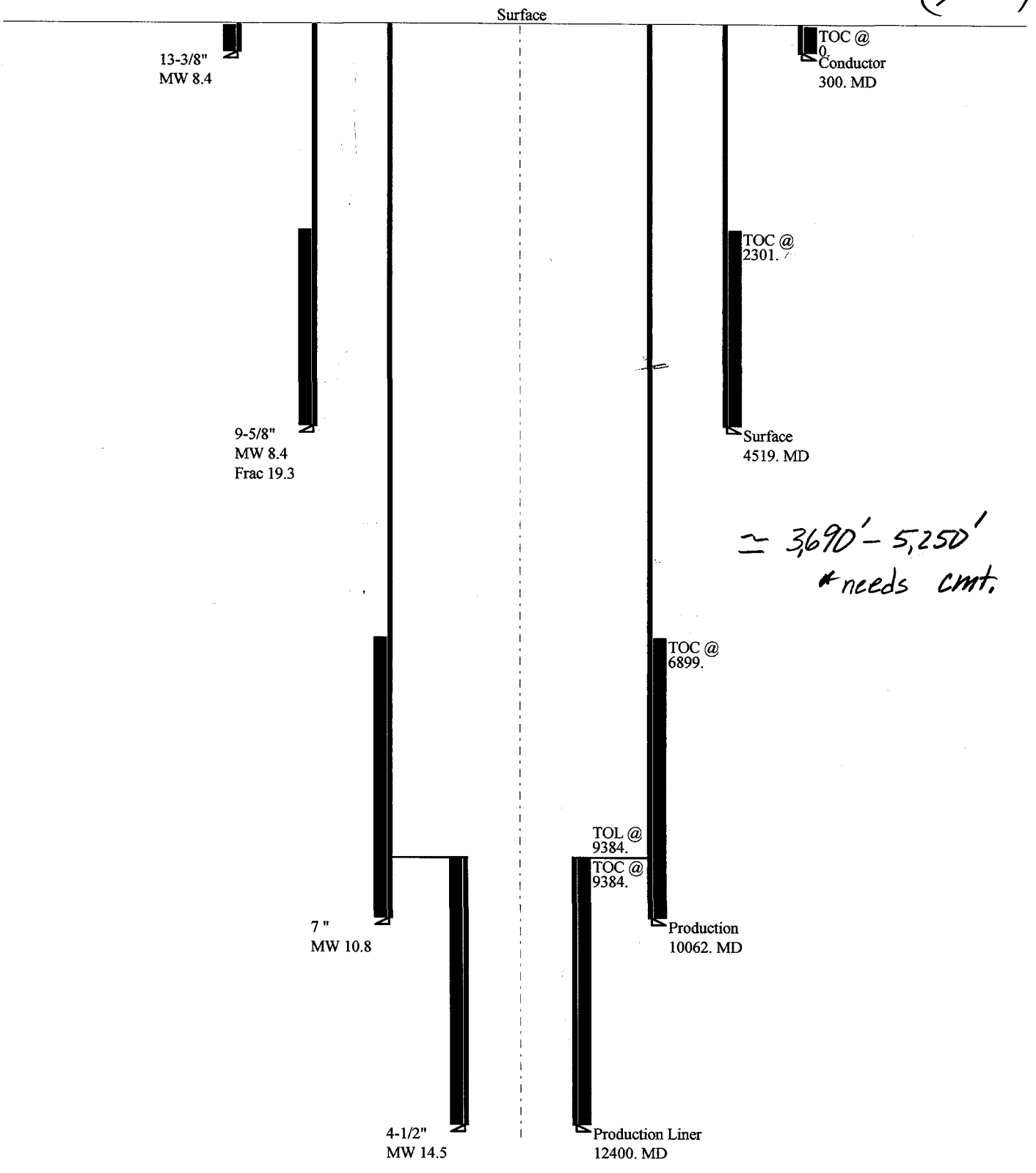
IWM SWD 3-30 B4 Chart showing: Perf interval, max ROP, Ave ROP and gross feet of perfs

Bed #	Zones of Interest	ROP Max	ROP Ave.	Comments- Tourqe etc.	Gross Feet of Perfs
1	4063-4068	88.6	77		5
2	4103-4118	92.9	67		15
3	4148-4153	62	38		5
4	4176-4182	61	60		6
5	4190-4198	125.9	95		8
6	4268-4278	104	82		10
7	4282-4286	50.4	45		4
8	4308-4323	96.3	76		13
9	4415-4420	56	50		5
10	4466-4481	91.5	75		15
11	4483-4486	111	95		3
12	4492-4500	78	70		8
13	4508-4518	71	40	Drill break was interupted by rig maint.	10
14	4529-4534	38	35	Not much of a drilling break but went from 11 to 35 fair porosity	5
15	4542-4550	74	65		8
16	4556-4560	90.5	82		4
17	4575-4600	45-50	37	Not much of a drilling break, thinnly laminated sands with interbedded shales, good low res	5
18	4632-4638	62	50		6
19	4642-4646	88	70	Thin but good break and porosity.	4
20	4654-4664	40	38	Not good drilling break but everything else is good.	10
21	4706-4718	102	84		12
22	4778-4784	136	75		6
23	5007-5012	20	15	No break but fair porosity and low res.	5
24	5122-5130	95	80		8
				total # of feet- Will perf with 4" carriers 39 grm shaped charge with pen of 58"	180

43013301980000 Christman-Bland compl

≃ 1,700' S (SSW)

Casing Schematic



Well name:	**43013301980000 Christman-Bland compl**
Operator:	**McCollouch Oil**
String type:	Conductor
Location:	Duchesne County
Project ID:	43-013-30198-0000

Design parameters:

Collapse
Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 95 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 131 psi
Annular backup: 2.33 ppg

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 263 ft

Environment:
H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 69 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 185 ft

Cement top: Surface

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	300	13.375	48.00	H-40	ST&C	300	300	12.59	264.5

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	131	740	5.653	95	1730	18.23	14	322	22.36 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 810-538-5281
Date: August 25,2011
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 300 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes.
Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**43013301980000 Christman-Bland compl**
Operator:	**McCollouch Oil**
String type:	Surface
Location:	Duchesne County
Project ID:	43-013-30198-0000

Design parameters:

Collapse
Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 3,977 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 4,519 psi
Annular backup: 2.33 ppg

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 3,954 ft

Environment:
H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 128 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 185 ft

Cement top: 2,301 ft

Non-directional string.

Re subsequent strings:
Next setting depth: 10,062 ft
Next mud weight: 10.800 ppg
Next setting BHP: 5,645 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 4,519 ft
Injection pressure: 4,519 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	4519	9.625	40.00	K-55	ST&C	4519	4519	8.75	1923.9

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	1972	2570	1.303	3977	3950	0.99	181	486	2.69 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 810-538-5281
Date: August 25,2011
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 4519 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes.
Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**43013301980000 Christman-Bland compl**
Operator:	**McCollouch Oil**
String type:	Production
Project ID:	43-013-30198-0000
Location:	Duchesne County

Design parameters:

Collapse

Mud weight:	10.800 ppg
Internal fluid density:	2.230 ppg

Burst

Max anticipated surface pressure:	3,432 psi
Internal gradient:	0.220 psi/ft
Calculated BHP	5,645 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor	1.125

Burst:

Design factor	1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

Tension is based on buoyed weight.
Neutral point: 8,531 ft

Environment:

H2S considered?	No
Surface temperature:	65 °F
Bottom hole temperature:	206 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	368 ft
Cement top:	6,899 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
2	9000	7	23.00	HCL-80	FL-4S	9000	9000	6.25	1989.3
1	1062	7	26.00	N-80	FL-4S	10062	10062	6.151	228.1

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
2	4007	5568	1.390	5412	6340	1.17	197	349	1.78 J
1	4480	5410	1.208	5645	7240	1.28	-10	474	-45.18 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 810-538-5281
Date: August 25,2011
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 10062 ft, a mud weight of 10.8 ppg An internal gradient of .116 psi/ft was used for collapse from TD
Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**43013301980000 Christman-Bland compl**
Operator:	**McCollouch Oil**
String type:	Production Liner
Location:	Duchesne County
Project ID:	43-013-30198-0000

Design parameters:

Collapse
Mud weight: 14.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 6,612 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 9,340 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 11,758 ft

Environment:
H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 239 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 9,384 ft

Liner top: 9,384 ft
Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	3000	4.5	13.50	P-110	FL-4S	12400	12400	3.795	251.4

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	9340	10680	1.143	9340	12410	1.33	32	252	7.92 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 810-538-5281
Date: August 25,2011
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
For this liner string, the top is rounded to the nearest 100 ft.Collapse is based on a vertical depth of 12400 ft, a mud weight of 14.5 ppg The Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Form OGCC-3

SUBMIT IN DUPLICATE*

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

(See other instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: #163.319.002

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

8. FARM OR LEASE NAME: Christman-Bland

2. NAME OF OPERATOR: McCulloch Oil Corporation

9. WELL NO.: No. 1-31

3. ADDRESS OF OPERATOR: 2000 Classen Bldg., Suite 614-E., Oklahoma City, Okla. 73127

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*

At surface 1257' FNL & 1552' FEL, Sec. 31, T2S, R4W

At top prod. interval reported below Same

At total depth Same

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: 31, T2S, R4W

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
#43-013-30198		Duchesne	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
2-5-73	7-15-73	August 28, 1973	GL - 6091'	6091'

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12,025'	11,950'		→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: Wasatch 10,409-11,545'

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIL; CNL; BHC Sonic

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	23 & 26#	300'	17-1/2"	400 sks. Class "H"	None
9-5/8"	36#	4519'	12-1/4"	625 sks. Class "H"	None
7"		10,052'	8-3/4"	465 sks. Class "H"	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
4-1/2"	9738'	12,024'	621	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	10,350'	10,350'

31. PERFORATION RECORD (*Interval, size and number*): 10,409-11,545' (58 holes)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
10,409-11,545'	25,000 gals. 15% HCl

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
August 1, 1973	Flowing	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9-1-73	24	20/64"		466	771	22	1654

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
1000	0		466	771	22	

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented

TEST WITNESSED BY:

35. LIST OF ATTACHMENTS: Electric Log

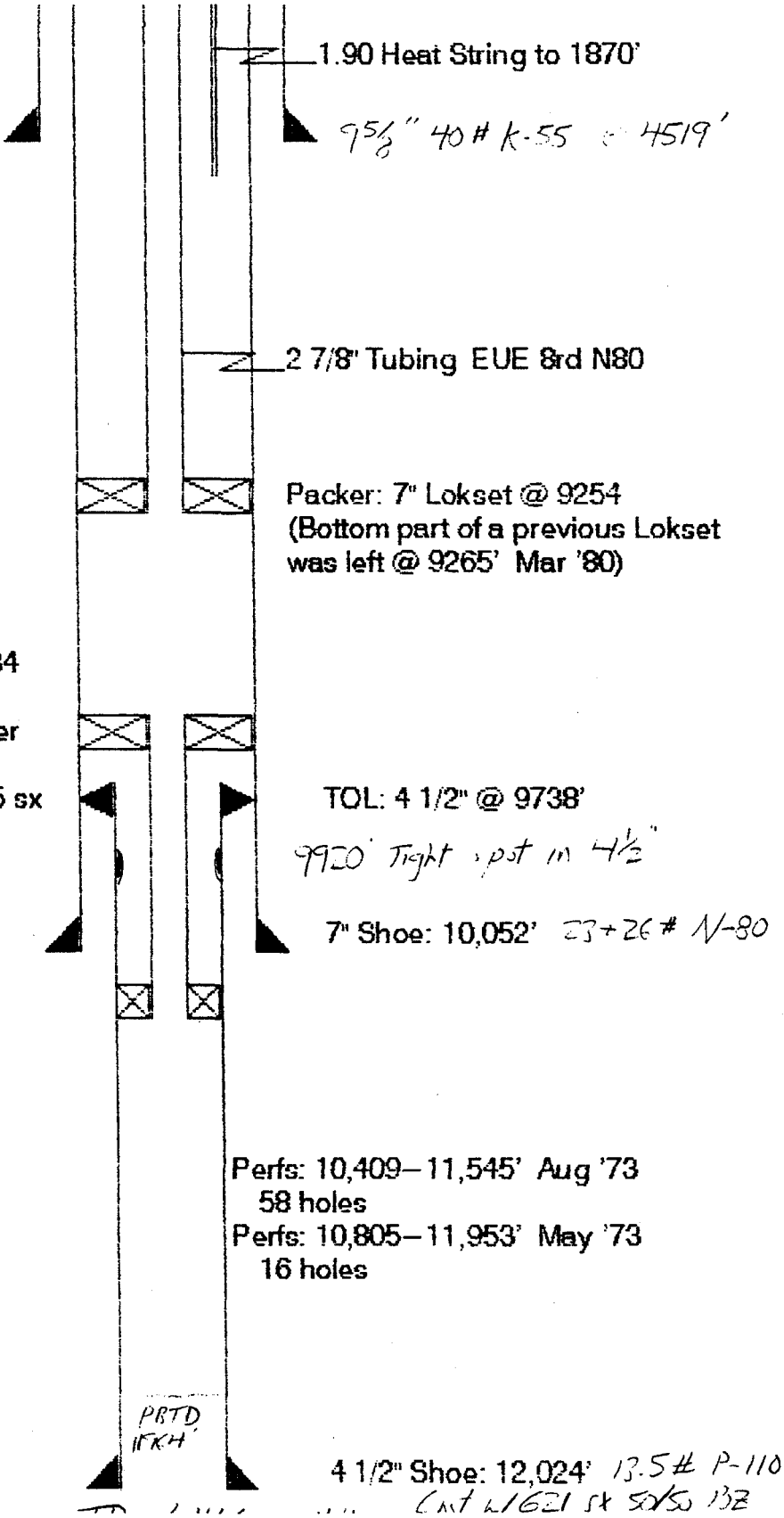
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Stephen D Owen TITLE Steve Owen, Engineer DATE 9-11-73

*(See Instructions and Spaces for Additional Data on Reverse Side)

CHRISTMAN BLANN 1–31B4

Sec 31; 2S; 4W



Average Production:
19 ~~25~~ BOPD
150 ~~125~~ BWPD
85 MCFD

Downhole Pump:
Jet

Surface Equipment:
J100 belt drive

Comments:
SWD line to L. Russel 2–32B4

31–Aug–94

Form OGCC-1 b

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: McCulloch Oil Corporation

3. ADDRESS OF OPERATOR: 140 West 2100 South, Salt Lake City, Utah

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1257' FNL & 1552' FEL, SE NW NE, Sec. 31

5. LEASE DESIGNATION AND SERIAL NO.: #163.319.002

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: CHRISTMAN-BLAND

9. WELL NO.: #1-31

10. FIELD AND POOL, OR WILDCAT: Altamont

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 31, T. 2 S., R. 4 W.

14. PERMIT NO.: 43-013-30198

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 6091' GL

12. COUNTY OR PARISH: Duchesne

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			[ ]
(Other)			[ ]				

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

REPORT FOR THE MONTH OF FEBRUARY, 1973

CONFIDENTIAL

Feb. 6: Depth: 230' (230') Spud Well 12:00 p.m. 2/5/73. Repairing swivel. Mud: 8.4, 60, NC.
Feb. 7: Depth: 300' (70') Nippling up. Ran 9 joints H-40, 48# 13 3/8" casing. Set @ 299'. Cemented with 450 sacks Class "G" with 2% CaCl. Cement circulated. 1.2 ft3/sx
Feb. 8: Depth: 300' (0') Testing BOP
Feb. 9: Drilling @ 1155' (855') Sand, Shale. Mud: Water
Feb. 10: Drilling @ 1380' (225') Shale, Sand. Mud: Water. Dev. 3/4° @ 1190'.
Feb. 11: Drilling @ 1960' (580') Shale, Sand. Mud: Water
Feb. 12: Fishing @ 2428' (468') Sand, Shale. Mud: Water. Twist drill pipe off one joint above drill collar. Left 18 DC, 1-12 1/4"stabilizer and 1-12 1/4" near bit reamer in hole. Going in hole with overshot.
Feb. 13: Trip @ 2674' (246') Sand, Shale. Mud: Water. GIH with 9 5/8" overshot with 7 7/8" grapple. Recovered Fish.
Feb. 14: Drilling @ 2917' (243') Sand, Shale. Mud: Water.
Feb. 15: Drilling @ 3400' (483') Sand, Shale. Mud: Water
Feb. 16: Drilling @ 3870' (470') Sand, Shale. Mud: Water
Feb. 17: Drilling @ 4430' (560') Sand, Shale. Mud: Water
Feb. 18: Depth: 4560' (130') Sand, Shale. Mud: Water. Ran Multi-shot 300'-4430'. Rig up to run 9 5/8" casing.
Feb. 19: Depth: 4560' (0') Ran 109 joints 9 5/8" casing, 40#, K-55, ST&C. Set @ 4519'

18. I hereby certify that the foregoing is true and correct

SIGNED Bob Caldwell TITLE District Manager DATE MAR 1 19[illegible]

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form OGCC-1 b

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL XXX GAS WELL ☐ OTHER

2. NAME OF OPERATOR: McCulloch Oil Corporation

3. ADDRESS OF OPERATOR: 140 West 2100 South, Salt Lake City, Utah, 84115

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface

5. LEASE DESIGNATION AND SERIAL NO.: #163.319.002

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: CHRISTMAN-BLAND

9. WELL NO.: #1-31

10. FIELD AND POOL, OR WILDCAT: Altamont

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA:

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.):

12. COUNTY OR PARISH:

13. STATE:

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			☐
(Other)			☐	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

FEBRUARY REPORT CONTINUED

Feb. 19: Cemented with 500 sacks 50/50 POZ, 8% gel, 1/4# flocele/sack. Followed with 300 sacks Class "G", 1/4# flocele/sack. Plug down @ 7 p.m. 2/18/73. 100% circulation.
Feb. 20: Depth: 4560' (0') Nippling up BOP, ran temperature survey, top of cement @ 2300'.
Feb. 21: Depth: 4560' (0') Nippled up and picking up 6 3/4" drill collars.
Feb. 22: Depth: 4560' (0') Waiting on gas buster and pit repair.
Feb. 23: Depth: 4560' (0') Nippled up gas buster and choke manifold. Installed kill line and repairing accumulator unit.
Feb. 24: Depth: 4560' (0') Preparing to drill out from under 9 5/8" casing.
Feb. 25: Drilling @ 5140' (580') Silt, Sand. Mud: Water
Feb. 26: Drilling @ 5564' (424') Silt, Sand. Mud: Water
Feb. 27: Drilling @ 5955' (391') Sand, Shale. Mud: Water
Feb. 28: Trip @ 6418' (463') Sand, Shale. Mud: Water

18. I hereby certify that the foregoing is true and correct

SIGNED Bob Alexander TITLE District Manager DATE MAR 1 1973

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form OGCC-1 b

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: McCulloch Oil Corporation

3. ADDRESS OF OPERATOR: 140 West 2100 South, Salt Lake City, Utah 84115

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface

5. LEASE DESIGNATION AND SERIAL NO.: #163,319,002

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: CHRISTMAN-BLAND

9. WELL NO.: #1-31

10. FIELD AND POOL, OR WILDCAT:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA:

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.):

12. COUNTY OR PARISH:

13. STATE:

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			[ ]
(Other)			[ ]				

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

REPORT FOR MARCH, 1973 - Continued

March 18: Circulating and conditioning hole to run 7" casing @ 10,062'. Through logging @ 10:00 p.m. 3/17/73. Ran Sonic and DHC. clean up trip to run 7". Background gas 3200, Trip gas 12,000. Mud: 10.8, 68, 5.8.

March 19: Depth: 10,062' (0') Layed down 4 1/2" drill pipe and drill collars. Now running 7" casing. Mud: 10.8, 68, 5.

March 20: WOC @ 10,062'. Ran 236 joints 7", 23#, 26#, N-80. Set @ 10,052'. Cemented with 265 sacks Halco Lite, 1/4# flocele/sack. Followed with 200 sacks Class "G", 1/4# flocele/sack, .3% HR-4. Plug down at 4:24 p.m. 3/19/73. Full returns during job.

March 21: WOC @ 10,062'. Ran Temperature Survey. Found top of cement @ 6900'. Nipple up and test BOP to 5000#. Preparing to pick up 3 1/2" drill pipe.

March 22: Depth: 10,062' (0') Circulating. Build mud volume @ 10,062'. Pick up 4 1/2" drill collars and 3 1/2" drill pipe. Drill cement from 10,007'-10,052'.

March 23: Drilling @ 10,120' (58') Sand, Lime, Shale. Mud: 11.1, 45, 4. Background gas 180, Connection gas 200.

March 24: Drilling @ 10,222' (102') Sand, Shale. Mud: 11.1, 50, 4.8. Background gas 80, Connection gas 100.

March 25: Drilling @ 10,314' (92') Sand, Shale. Mud: 11.0, 45, 4.8. Background gas 80, Connection gas 140.

March 26: Drilling @ 10,396' (82') Shale, Lime. Mud: 11.1, 47, 5.2. Background gas 50, Connection gas 110.

18. I hereby certify that the foregoing is true and correct

SIGNED B. G. Alexander TITLE District Manager DATE April 11, 1973

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form OGCC-1 b

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: McCulloch Oil Corporation

3. ADDRESS OF OPERATOR: 140 West 2100 South, Salt Lake City, Utah 84115

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface

5. LEASE DESIGNATION AND SERIAL NO.: #163,319.002

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: CHRISTMAN-BLAND

9. WELL NO.: #1-31

10. FIELD AND POOL, OR WILDCAT: Altamont

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 31, T. 2 S., R. 4 W.

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.):

12. COUNTY OR PARISH: Duchesne

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]				
(Other)			[ ]	(Other)			[ ]

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

APRIL, 1973, REPORT CONTINUED

April 17: Total Depth: 12,025'. Ran 54 joints 4 1/2", 13.5#, P-110, FL4S liner. Set liner @ 12,024'. Top of hanger @ 9738'. Float collar @ 11,978'. Cemented with 621 sacks 50/50 POZ, 1/4# flocele/sack, 1.25% D-8R, mixed with 15.1#/gal. Slurry volume 118 barrels. Good circulation throughout job with back flow when drill pipe was pulled out of liner. Job complete 11:55 p.m. 4/16/73.

1.99 ft³/sck

April 18: Found top cement @ 7600'. 2138' of cement on top of liner. Drilled 7600'-8752' (1152'). Mud: 14.5, 48, 8.

April 19: Drilled out cement to 9384', top of liner. Tested with 900 psi on top of 14.5# mud for 15 minutes. OK. Layed down drill pipe. Preparing to run Baker Bridge plug.

April 20: Ran bridge plug and set @ 2455'. Rig released 12:00 midnight 4/19/73.

April 21: Moving out Rotary

April 22: Moving out Rotary

April 23: Moving out Rotary

April 24: Rigging up workover rig

April 25: Rigging up workover rig

April 26: Rigged up workover unit, pressure tested BOP stack to 5000 psi. Preparing to pick up tubing.

April 27: Recovered Baker bridge plug @ 2545'. GIH with 3 3/4" bit to top of liner @ 9536'. Shut down for night.

18. I hereby certify that the foregoing is true and correct

SIGNED B. G. Alexander TITLE District Manager DATE

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

43-013-30198

Christman

Form DOGC-1a

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL [XX] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well
Oil Well [XX] Gas Well [ ] Other Single Zone [XX] Multiple Zone [ ]

2. Name of Operator
McCulloch Oil Corporation

3. Address of Operator
140 West 2100 South, Suite 120, Salt Lake City, Utah, 84115

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface
1257' FNL & 1552' FEL, SE NW NE Section 31
At proposed prod. zone

5. Lease Designation and Serial No.

6. If Indian, Allottee or Tribe Name

7. Unit Agreement Name

8. Farm or Lease Name
CHRISTMAN-BLAND

9. Well No.
#1-31

10. Field and Pool, or Wildcat
Altamont Development

11. Sec., T., R., M., or Blk. and Survey or Area
Sec. 31, T. 2 S., R. 4 W.,

12. County or Parrish
Duchesne

13. State
Utah

14. Distance in miles and direction from nearest town or post office*

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any) 1257'

16. No. of acres in lease

17. No. of acres assigned to this well 640

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft. None

19. Proposed depth 12,400'

20. Rotary or cable tools
Rotary

21. Elevations (Show whether DF, RT, GR, etc.)
6091' GL

22. Approx. date work will start*
February, 1973

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole (ft³/ft)	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
17 1/2" 1.67033	13 3/8"	48#	300'	375 cu ft
12 1/4" 0.81846	9 5/8"	40#	5000'	785 cu ft
8 3/4" 0.41758	7"	26#	10,000'	450 cu ft
6 1/8" 0.20461	4 1/2"	13.5#	12,400'	255 cu ft

1. Well to be drilled and casing cemented as proposed above
2. Mud Program
   0'-8100'± Water
   8100'-12,400' 8.3 to 15#/gal. as necessary to control hole.
3. Blowout Preventer Program
   a. 13 3/8" casing - 12" - 3000 psi Hydril
   b. 9 5/8" casing - 10" - 5000 psi Single Gate
      10" - 5000 psi Double Gate
      10" - 5000 psi Hydril
   c. 7" casing - same as 9 5/8" casing.
4. Blowout Control Equipment
   a. Degasser
   b. 5000 psi Choke Manifold with Gas Buster (over)

PLEASE HOLD INFORMATION CONFIDENTIAL

139-3/139-4

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

Signed W. W. Lupton Title District Manager Date 1/23/73

(This space for Federal or State office use)

Permit No. 43-013-30198 Approval Date

Approved by Title Date

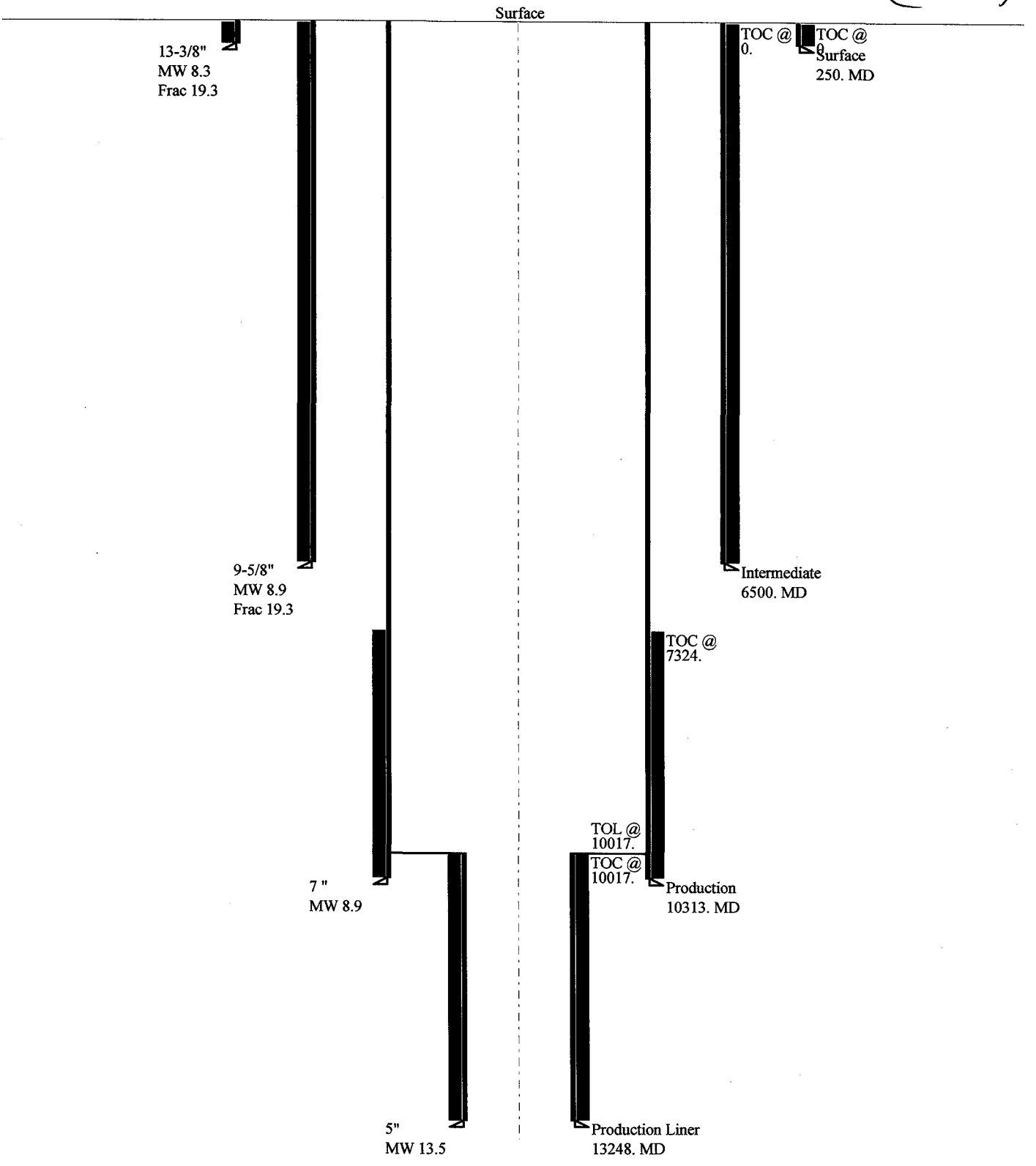
Conditions of approval, if any:

*See Instructions On Reverse Side

04-06 El Paso Katherine 3-29B4comp

Casing Schematic

≈ 2,000' E. (ENE)



Well name:	**04-06 El Paso Katherine 3-29B4comp**
Operator:	**El Paso Production**
String type:	Production
Location:	Duchesne County
Project ID:	43-013-32923

Design parameters:

Collapse
Mud weight: 8.900 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 5,399 psi
Internal gradient: -0.061 psi/ft
Calculated BHP 4,768 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 8,924 ft

Environment:
H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 209 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 7,324 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	10313	7	29.00	P-110	LT&C	10313	10313	6.059	2151.1

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4768	8530	1.789	5399	11220	2.08	299	797	2.66 J

Prepared by: Clinton Dworshak, Div of Oil,Gas & Mining
Phone: 801-538-5280
Date: August 25,2011
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 10313 ft, a mud weight of 8.9 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**04-06 El Paso Katherine 3-29B4comp**
Operator:	**El Paso Production**
String type:	Production Liner
Location:	Duchesne County
Project ID:	43-013-32923

Design parameters:

Collapse

Mud weight: 13.500 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 7,701 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 9,291 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

Tension is based on air weight.
Neutral point: 12,581 ft

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 250 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 10,017 ft

Liner top: 10,017 ft
Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	3248	5	18.00	HCP-110	LT&C	13248	13248	4.151	323.9

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	9291	13470	1.450	9291	13940	1.50	58	495	8.47 J

Prepared by: Clinton Dworshak, Div of Oil,Gas & Mining
Phone: 801-538-5280
Date: August 25,2011
Salt Lake City, Utah

Remarks:
For this liner string, the top is rounded to the nearest 100 ft.Collapse is based on a vertical depth of 13248 ft, a mud weight of 13.5 ppg The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

43-013-32923
Katherine

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
7. UNIT or CA AGREEMENT NAME: N/A
8. WELL NAME and NUMBER: Katherine 3-29B4
9. API NUMBER: 4301332923
10 FIELD AND POOL, OR WILDCAT: Altamont

1a. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR: El Paso E&P Company, LP

3. ADDRESS OF OPERATOR: 1099 18th St, Ste 1900 CITY Denver STATE CO ZIP 80202
PHONE NUMBER: (303) 291-6400

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 670' FSL, 1217' FWL
AT TOP PRODUCING INTERVAL REPORTED BELOW: same
AT TOTAL DEPTH: same

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 29 2S 4W
12. COUNTY: Duchesne
13. STATE: UTAH

14. DATE SPUDDED: 4/19/2006
15. DATE T.D. REACHED: 7/2/2006
16. DATE COMPLETED: 11/13/2006 ABANDONED ☐ READY TO PRODUCE ☑
17. ELEVATIONS (DF, RKB, RT, GL): 6181.6' GL

18. TOTAL DEPTH: MD 13,260 TVD 13,260
19. PLUG BACK T.D.: MD TVD
20. IF MULTIPLE COMPLETIONS, HOW MANY? *
21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
CBL, COMP ZDL/NEUTRON/GR/CAL, HDIL/GR/CAL

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☑ YES ☐ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
12 1/4"	9 5/8 N80	40	0	6,510		HiFill 875	495	Surface	N/A
8 3/4"	7" P110	29	0	10,313		HiFill 290	140	8350 Cal	N/A
7"	5" P110	18	10,017	13,248		Cemnet	106	11200 Cal	N/A

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"	7,625							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) WASATCH	10,238	12,901	10,238	12,901
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)		SIZE	NO. HOLES	PERFORATION STATUS
12,412	12,901	3 1/8"	165	Open ☑ Squeezed ☐
11,970	12,335	3 1/8"	195	Open ☑ Squeezed ☐
11,389	11,921	3 1/8"	315	Open ☑ Squeezed ☐
				Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
12412 - 12901	73,070 lbs 20/40 Carboprop; 5000 gal 15% HCL
11970 - 12335	70,640 lbs 20/40 Carboprop; 4000 gal 15% HCL
11389 - 11921	140,000 lbs 20/40 Carboprop; 5000 gal 15% HCL

29. ENCLOSED ATTACHMENTS:
☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☐ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: Producing

(5/2000) (CONTINUED ON BACK)

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STATE OF UTAH
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DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: FEE

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: KATHERINE 3-29B4

2. NAME OF OPERATOR: EL PASO PRODUCTION OIL AND GAS COMPANY

9. API NUMBER: 4301332923

3. ADDRESS OF OPERATOR: 1339 EL SEGUNDO NE ALBUQUERQUE NM 87113

PHONE NUMBER: (505) 344-9380

10. FIELD AND POOL, OR WILDCAT: ALTAMONT/BLUEBELL

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 670' FSL, 1217' FWL

COUNTY: DUCHESNE

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 29 2S 4W

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☑ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 6/15/2006	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: PRODUCTION CSG
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUE DRILLING F/ 6510' - 10,303'. RUN 7" 29# LT&C CSG TO 10,303'. M&P 155 SX 50/50 POZ+, 11.0 PPG, 3.81 YIELD LEAD. TAIL W/ 135 SX 13.5 PPG, 1.46 YIELD. FLOATS HELD. RD HALLIBURTON.

NAME (PLEASE PRINT) CHERYL CAMERON TITLE REGULATORY ANALYST

SIGNATURE Cheryl Cameron DATE 6/20/2006

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(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: FEE

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: KATHERINE 3-29B4

2. NAME OF OPERATOR: EL PASO PRODUCTION OIL AND GAS COMPANY

9. API NUMBER: 4301332923

3. ADDRESS OF OPERATOR: 1330 EL SEGUNDO NE CITY ALBUQUERQUE STATE NM ZIP 87113

PHONE NUMBER: (505) 344-9380

10. FIELD AND POOL, OR WILDCAT: ALTAMONT/BLUEBELL

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 670' FSL, 1217' FWL

COUNTY: DUCHESNE

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 29 2S 4W

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 4/27/2006	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: SURF CSG
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

DRILLED 17 1/2" HOLE 282' DEEP. SET 13 3/8" W/ GUIDE SHOE, 3 CENTRALIZERS, AND BAFFLE PLATE, SET @ 224'. CMT W/ 350 SX GLASS G 2% CACL W/ 1/4#/SK FLOCELE, 1.15 YIELD, 15.8 PPG, 4.97 WTR. 31 BC TO SURF.

NAME (PLEASE PRINT) CHERYL CAMERON TITLE REGULATORY ANALYST

SIGNATURE Cheryl Cameron DATE 4/28/2006

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(5/2000) (See Instructions on Reverse Side)

El Paso Production Company

Katherine 3-29B4

API #: 4301332923
Sec. 16, T2S – R3W
Altamont Bluebell Field
Duchesne County, Utah

Procedure:

1. MIRU WO rig. Pump heated 2% KCl water as needed to help unseat pump. Unseat pump and POOH with rods and pump.

2. ND wellhead, NU BOP. Release 7" TAC @ 7,296' and TOH with tubing and BHA.

3. PU and TIH with 6" bit and 7" casing scraper to top of liner @ 10,017'. TOOH w/ bit and scraper.

4. PU and TIH with 4-1/8" bit and 5" casing scraper to 11,410'. TOOH w/ bit and scraper.

5. RU wireline unit and RIH with CBP and set @ 11,384'. POOH. Dump bail 10' of cement on CBP. POOH.

6. Pressure test casing to 4,000 psi for 30 minutes. If the casing does not test, consider isolating a possible leak with a bridge plug and packer and performing remedial action.

7. RU wireline with 5k lubricator and test to 5,000 psi with water. RIH and shoot squeeze holes at 11,130' with 3-1/8" HSC, 22.7 gm charges, 3 jspf and 120° phasing. All perforations are to be correlated to the High Definition Induction Log/ Compensated Z-Densilog/ Compensated Neutron Log dated July 5, 2006. POOH.

8. RIH with CICR and set @ 11,080'. POOH and RD wireline.

9. TIH with +/- 1,200' of 2-3/8", 4.7#/ft N-80 tubing followed by 2-7/8", 6.5 #/ft N-80 tubing (TOL @ 10,017') and sting into CICR. Pressure test annulus to 1,000 psi. Establish injection rate and pressure into squeeze holes with 2% KCl water.

10. RU cementers. Mix and pump 75 sks Low Fluid Loss Class G cement at 15.6 ppg followed by 25 sks Class G cement w/ retarder as needed at 16.0 ppg. (Cement designs based on 225°F @ 11,130'.) Sting out of CICR. Pull 2 jts of tubing and reverse tubing clean. TOOH.

11. RU WL unit and run CBL/VDL/GR/CCL log from CICR to top of 5" liner. Consult with Denver office on cement coverage. Correlate log to High Definition Induction Log/ Compensated Z-Densilog/ Compensated Neutron Log dated July 5, 2006. If cement coverage is adequate then proceed to

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☑
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: FEE	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL ☑ REENTER ☐ DEEPEN ☐	7. IF INDIAN, ALLOTTEE OR TRIBE NAME:
B. TYPE OF WELL: OIL ☑ GAS ☐ OTHER _____ SINGLE ZONE ☑ MULTIPLE ZONE ☐	8. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: EL PASO PRODUCTION OIL AND GAS COMPANY	9. WELL NAME and NUMBER: KATHERINE 3-29B4
3. ADDRESS OF OPERATOR: 1339 EL SEGUNDO NE ALBUQUERQUI NM 87113 — PHONE NUMBER: (505) 344-9380	10. FIELD AND POOL, OR WILDCAT: ALTAMONT/BLUEBELL
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 670' FSL, 1217' FWL AT PROPOSED PRODUCING ZONE:	11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 29 2S 4W
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 9.1 MILES NORTHEAST OF DUCHESNE, UT	12. COUNTY: DUCHESNE — 13. STATE: UTAH

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET)	16. NUMBER OF ACRES IN LEASE:	17. NUMBER OF ACRES ASSIGNED TO THIS WELL:
670'	640	640
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET)	**19. PROPOSED DEPTH:**	**20. BOND DESCRIPTION:**
3200'	13,250	400JU0705
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.):	**22. APPROXIMATE DATE WORK WILL START:**	**23. ESTIMATED DURATION:**
6181.6' GR	3/30/2006	60 DAYS

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
17 1/2	13 3/8	J-55	54.5#	250	50/50 POZ	120 SX	1.98	12.5
12 1/4	9 5/8	N-80	40#	6,500	50/50 POZ	950 SX	1.98	12.5 LEAD
					PREM +	260 SX	1.22	14.35 TAIL
						950 SX	1.98	12.50 TAIL
8 3/4	7	HCP-110	29#	10,300	50/50 POZ	440 SX	1.46	13.50 LEAD
6 1/8	5	HCP-110	18#	13,250	PREM +	160 SX	1.56	15.60

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
- ☑ COMPLETE DRILLING PLAN
- ☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) CHERYL CAMERON TITLE REGULATORY ANALYST

SIGNATURE Cheryl Cameron DATE 4/3/2006

(This space for State use only)

API NUMBER ASSIGNED: 43-013-32423

Approved by the Utah Division of Oil, Gas and Mining

Date: 04-06-06

By: _____

(See Instructions on Reverse Side)

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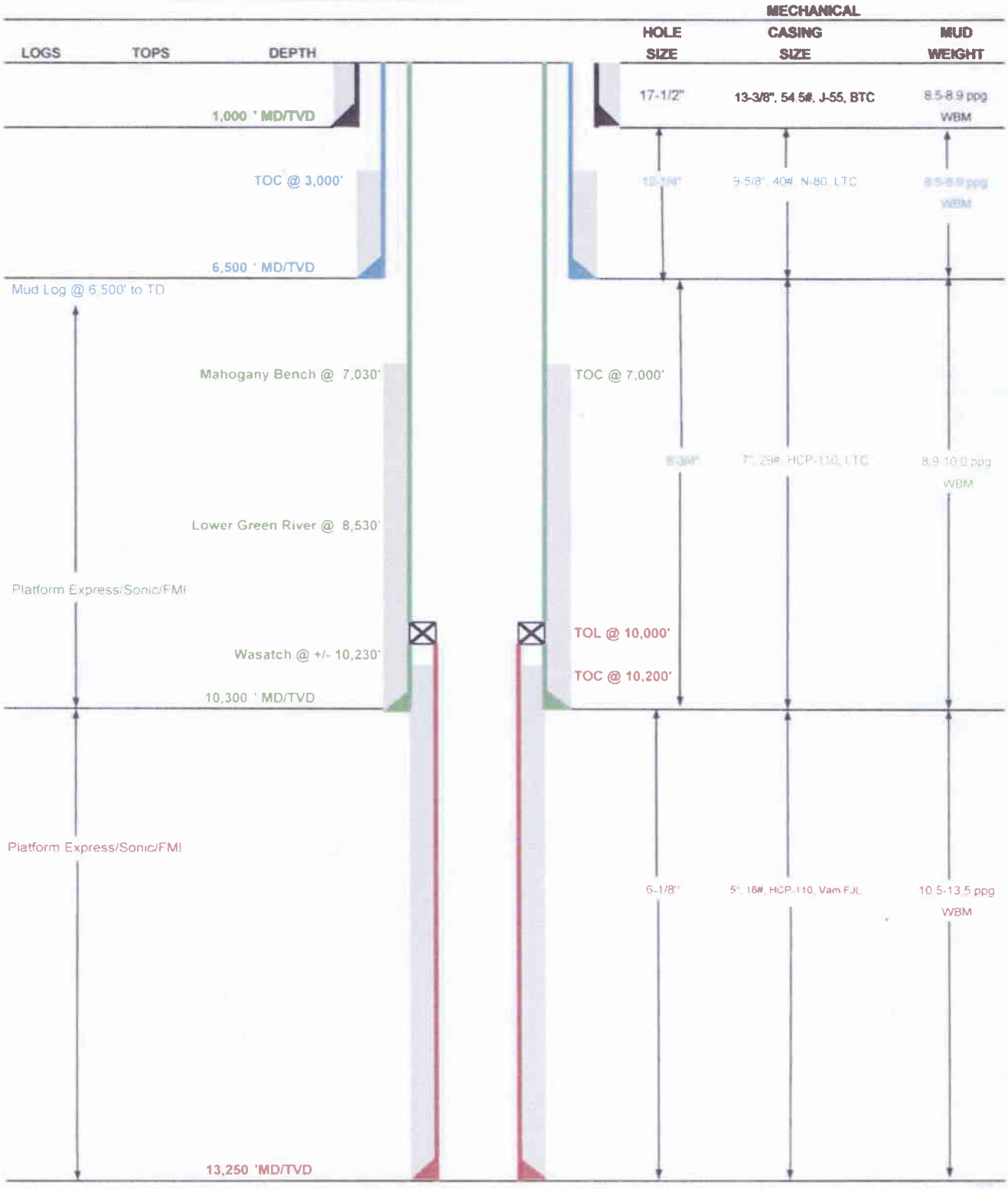
DIV. OF OIL, GAS & MINING

(11/2001)

elpaso Production

Drilling Prognosis

COMPANY NAME	El Paso Production	DATE	September 30, 2005
WELL NAME	**Katherine #3-29B4**	TD	13,250' MD/TVD
FIELD	Altamont - Bluebell 670 8217	COUNTY Duchesne STATE Utah	Elev. 6,183'
SURFACE LOCATION	~~563~~' FSL, ~~1,535~~' FWL, SE/SW, SEC. 29, T2S, R4W		BHL Straight Hole
OBJECTIVE ZONE(S)	Green River, Wasatch		
BOPE INFO	13-5/8" 5M double BOP stack and 5M kill lines and choke manifold 1,000' - 10,300'.		
	A 7-1/16" 10M triple stack from 10,300' - TD		



DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS BURST	DESIGN FACTORS COLLAPSE	DESIGN FACTORS TENSION
						2,730	1,130	853,000
SURFACE	13-3/8	0-1000'	54.50	J-55	BTC	5.36	2.41	5.52
						5,750	3,090	737,000
INTERMEDIATE	9-5/8"	0 - 6,500'	40.00	N-80	LTC	1.58	1.02	2.05
						11,220	9,200	797,000
PRODUCTION	7"	0 - 10,300'	29.00	HCP-110	LTC	2.65	1.72	2.00
						13,940	13,470	353,000
PRODUCTION LINER	5"	10,000' - 13,250'	18	HCP-110	Vam FJL	1.97	1.50	2.31

CEMENT PROGRAM		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE							
	Lead	800	50/50 Poz Premium + 10% Cal-Seal + .25 pps Flocele	562	100%	12.50	1.98
	Tail	200	Premium + 2% Calcium Chloride + .25 pps Flocele	273	100%	15.80	1.17
INTERMEDIATE	Lead	3,000	CBM Light	287	25%	10.50	4.10
	Tail	500	50/50 Poz + 0.6% Halad-322+ 5 pps Gilsonite +5% Salt + 1 pps Granulite	175	25%	14.35	1.22
PRODUCTION	LEAD	7000-10300	50/50 Poz +0.25 lb/sk Flocele+5 pps Silicate	440	25%	13.50	1.46
	Fill	3,300	+ 0.1% HR-12 + .2% CFR-3				
PRODUCTION LINER	Fill	10300-13250	Premium + .5% Halad-344 + 35% SSA-1	160	15%	15.60	1.56
	Fill	2,950	+ 0.4% CFR-3 + 4% HR-12				
	Liner Lap	100					

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Float shoe, 1 joint, float collar. Centralize 5' above shoe & 5 centralizers every third collar. Thread lock FE & bottom joint
INTERMEDIATE	Float shoe, 1 joint, float collar. Centralize every 4th joint to 3000'. Thread lock all FE
PRODUCTION	Float shoe, 1 joint, float collar. Centralize every 4th joint to 8000'. Thread lock all FE
LINER	Float shoe, 1 joint, float collar. Centralize every 4th joint to top of pay. Thread lock all FE

PROJECT ENGINEER: Buddy Novak

DRILLING MANAGER: Scott Palmer

Wellbore Diagram

API Well No: 43-013-32923-00-00 **Permit No:** **Well Name/No:** KATHERINE 3-29B4

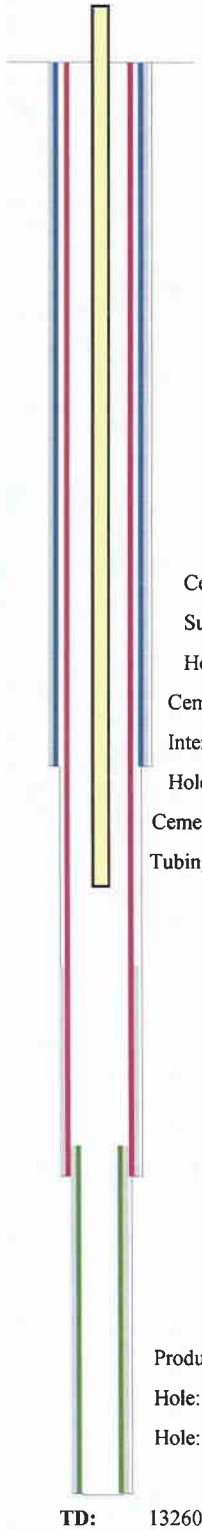
Company Name: EL PASO E&P COMPANY, LP

Location: Sec: 29 T: 2S R: 4W Spot: SWSW

Coordinates: X: 554015 Y: 4458064

Field Name: ALTAMONT

County Name: DUCHESNE



TD: 13260 **TVD:** 13260 **PBTD:**

String Information

String	Bottom (ft sub)	Diameter (inches)	Weight (lb/ft)	Length (ft)
HOL1	6510	12.25		
SURF	6510	9.625	40	6510
HOL2	10303	8.75		
I1	10303	7	29	10313
HOL3	13260	7		
PROD	13248	5	18	13248
T1	7625	2.875		

Cement Information

String	BOC (ft sub)	TOC (ft sub)	Class	Sacks
I1	10303	8350	PC	155
I1	10303	8350	G	135
PROD	13248	10017	G	100
SURF	6510	0	UK	875

Perforation Information

Top (ft sub)	Bottom (ft sub)	Shts/Ft	No Shts	Dt Squeeze
10985	12901			

Formation Information

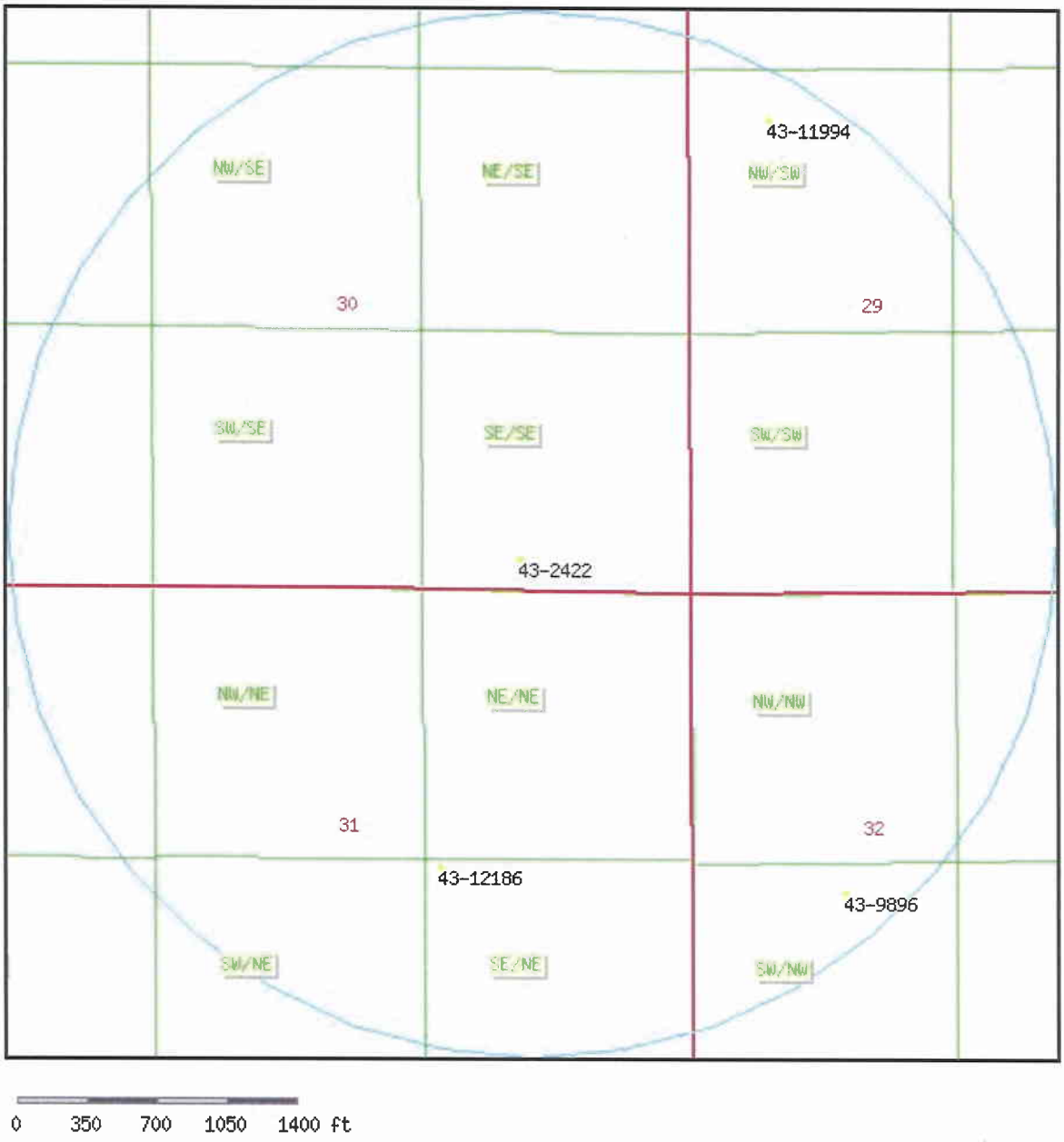
Formation	Depth

Utah Division of Water Rights

Output Listing

Version: 2009.05.06.00 **Rundate: 08/31/2011 01:44 PM**

Radius search of 2640 feet from a point N300 W800 from the SE corner, section 30, Township 2S, Range 4W, US b&m Criteria:wrtypes=W,C,E podtypes=S,U,D,Sp,P,R,T status=U,A,P usetypes=all



Water Rights

WR Number	Diversion Type/Location	Well Log	Status	Priority	Uses	CFS	ACFT	Owner Name

43-11994	Underground		A	20070906 DIS	0.000 1.730	TYRELL G. AND MARIAH J. FARNSWORTH
	S250 E400 W4 29 2S 4W US					P.O. BOX 143
43-12186	Underground	well info	A	20090120 M	0.000 0.730	DUCHESNE/WASATCH BLUEBENCH LANDFILL
	S1382 W1262 NE 31 2S 4W US					SPECIAL SERVICE DISTRICT
43-2422	Underground		P	19701013 S	0.015 0.000	CITY DEVELOPMENT INC.
	N174 W864 SE 30 2S 4W US					90 SOUTH 400 WEST, SUITE 360
43-9896	Underground	well info	P	19970710 DO	0.000 0.500	DUCHESNE COUNTY BLUE BENCH LANDFILL
	S1503 E773 NW 32 2S 4W US					C/O MANAGER

UIC #385.1

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

APPLICATION FOR INJECTION WELL

Name of Operator	Utah Account Number	Well Name and Number
Integrated Water Management	N	Gertiz-Murphy 1-6 C4
Address of Operator	**Phone Number**	**API Number**
PO Box 430 CITY Altamont STATE UT ZIP 84001	(435) 454-4646	4301330573
Location of Well		**Field or Unit Name**
Footage : 1976' FNL 1778' FEL County : Duchesne		
QQ, Section, Township, Range: SWNE 6 3S 4W State : UTAH		**Lease Designation and Number**

Is this application for expansion of an existing project?		Yes ☑	No ☐
Will the proposed well be used for:	Enhanced Recovery?	Yes ☐	No ☐
	Disposal?	Yes ☑	No ☐
	Storage?	Yes ☐	No ☐
Is this application for a new well to be drilled?		Yes ☐	No ☑
If this application is for an existing well, has a casing test been performed?		Yes ☐	No ☑

Date of test: _____

Proposed injection interval: from 4,000 to 7,000

Proposed maximum injection: rate 6,000 bpd pressure 800 psig

Proposed injection zone contains oil ☐, gas ☐, and / or fresh water ☐ within ½ mile of the well.

List of attachments: Attachments prepared with body of application included. Following the conversion the new name of the well will be IWM SWD 2-6 C4

ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Robert L. Ballou Title Geologist/Agent

Signature Robert L Ballou Date 1/19/2012

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JAN 23 2012
DIV. OF OIL, GAS & MINING

(5/2002)

REQUIREMENTS FOR CLASS II INJECTION WELLS INCLUDING WATER DISPOSAL, STORAGE AND ENHANCED RECOVERY WELLS SECTION V - RULE R615-5-2

1. Injection well shall be completed, equipped, operated, and maintained in a manner that will prevent pollution and damage to any USDW, or other resources and will confine injected fluids to the interval approved.

Integrated Water Management, a Utah Corporation is the operator of an existing SWD facility located 8 miles north and 1 mile east of Duchesne, Utah. IWM is bonded by the DOGM to conduct operations in its existing evaporation pits and SWD well associated with its SWD operations. This application is submitted as support for IWM to convert a previous producing well that is currently plugged and abandoned located approximately 1.5 miles south of IWM's current operations. This SWD well to be incorporated in conjunction with current operations. Applicant proposes to gravity feed filtered water to the proposed location (Geritz-Murphy 1-6 C4) and to dispose of such produced water by injection underground into the Uintah/Upper Green River formations underlying the proposed disposal well.

Applicant proposes to convert the 1-6 C4 **API # 43-013-30573** into a SWD well to be designated the **IWM SWD 2-6 C4,** located 1976 feet from the north line and 1978 feet from the east line of section 6, 3S, 4W, Duchesne, County, Utah. Location of the proposed conversion site is shown in **Exhibit B** Note: **Exhibit A** details the surface owners within a 1/2 mile radius of the proposed well conversion location. As shown on **Exhibit B**, there are no other wells drilled within a 1/2 mile of the proposed location

2. The application for an injection well shall Include a properly completed Form DOGM-UIC-1 and the following:

2.1 A plat showing the location of the injection well, all abandoned or active wells within a one-half mile radius of the proposed wells, and the surface owner and the operator of any lands or producing leases, respectively, within a one-half mile radius of the proposed injection well.

See **Exhibits A and B.**

2.2 Copies of electrical or radioactive logs, including gamma ray logs, for the proposed well run prior to the installation of casing and indicating resistivity, spontaneous potential, caliper and porosity.

A full suite of logs have been run on this well including a Triple combination (Electric log, Density/Neutron). All logs are currently on file with DOGM.

2.3 A copy of a cement bond or comparable log run for the proposed injection well after casing was set and cemented.

A cement bond log (CBL) is on file with DOGM.

2.4 Copies of logs already on file with the Division should be referenced, but need not be re-filed.

All copies of logs in area of review are on file with the Utah Division of Oil, Gas and Mining.

2.5 A description of the casing or proposed casing program of the injection well and of the proposed method for testing the casing before use of the well.

The current well bore schematic (from the DOGM well file), is provided as **Exhibit C.** The original casing in the well is detailed on the original completion report included as. **Exhibit D.** It details the condition of the wellbore following P&A procedures. Note: during P&A procedures the 7" intermediate casing was cut off @ 1552' and removed. A detailed procedure for reestablishing Mechanical Integrity of the casing string, perforation intervals and down hole operations are detailed in **Exhibit E.** Proposed casing program is to replace previously removed 7" casing by running new 7" casing. Note: 9 5/8" casing is set at 1502' and cemented to surface. Original 7" casing was set to 9900' and cemented with 850 sks of cement. CBL shows a cement top of 5920'.

2.6 A statement as to the type of fluid to be used for injection, its source and estimated amounts to be Injected daily.

The primary type and source of fluid to be used for injection will be production water that has been conditioned, filtered and gravity fed from IWM's disposal facility. The estimated average rate of injection will be 3000 BPD, and the estimated maximum rate of injection will be 6000 BPD.

2.7 Standard laboratory analysis of the fluid to be injected, the fluid in the formation into which the fluid is being injected, and the compatibility of the fluids.

Production water analysis will vary depending on the company and associated location that the production is coming from. Included are representative analysis of produced water from 3 IWM costumer wells . See **Exhibit F-1, F2,F3.**

Included are water analysis reports from four SWD wells in the immediate vicinity, (two drilled as SWD wells and not as recompletions from a producing oil and gas well, to a SWD well and one the well in section 36 as a conversion of a previous production well). These wells are;

To the north and west of the proposed IWM SWD 2-6C4, The **LDS Church 2-27 B5). Exhibit G1-A,G1-B**

To the north and east of the proposed IWM SWD 2-6 C4, **The Russell SWD 2-32B4. Exhibit G2-A,G2-B**

To the north and west of the proposed IWM SWD 2- C4, **The Rhodes Moon 1-36 B5. Exhibit G3**

To the south and west of the proposed IWM SWD 2-6C5, **The Blue Bench 1-13 C5, Exhibit G-4**

These water analysis reports are from actual swab tests of specific intervals and show that formation water from produced water and in the proposed injection interval, as noted, the Duchesne River-Uintah/Tgr formations because of their measured TDS amounts, are unfit for domestic livestock, irrigation or other general uses.

It is proposed that in the IWM SWD 2-6 C4, IWM will take a representative sample of formation water by production swab over an interval to be selected and approved by DOGM. IWM will notify the DOGM prior to taking such samples and conducting such tests in order that the DOGM may witness the tests and take independent samples if desired. Results will be forwarded to DOGM.

2.8 **The proposed average and maximum injection pressures.**

Judging from the data collected from the similar wells in the immediate area The proposed average injection pressure will be approximately 500 psig and the maximum injection pressure will not exceed 800 psig.

2.9 Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining Interval that could enable the injected fluid or formation fluid to enter the fresh water strata.

The minimum fracture gradient for the IWM SWD 2-6 C4 calculates at 0.733 psig/ft. However a gradient step rate test will be run on the well to determine the maximum injection pressure. Historically this has not been an issue in the SWD wells located within a township of the IWM SWD 2-6 C4 as they all have operated at pressures of less than 800#, some much less.

Additionally, the injection system will be equipped with high and low pressure shut down devices that will automatically shut in injection waters if a system blockage or leakage occurs. One way check valves will also ensure proper flow management. Relief valves will also be utilized for high-pressure relief

2.10 Appropriate geological data on the injection interval and confining beds, including the geologic name, lithologic description, thickness, depth, and lateral extent.

Listed below are several wells listed that because of their close proximity to the subject well are listed as corollaries to the proposed IWM SWD 2-6C4.

In the Russell SWDW 2-32B4 the gross injection zones are 2464'-3726', (2464-2470', 2548'-2558', 2630'-2638', 2884'-2890', 3054-3062', 3720'-3726', two holes per foot). Records from 1/86 to 9/10 show that this well disposed of 6,836,018 BW with a maximum tubing pressure of 830 # and an average tubing pressure of about 600#. Note: this figure does not include the unreported water that was put away from 1975-1986.

In the LDS 2-27 B5 the gross injection zones are (2088-2860, 2088'-2098', 2129'-2136', 2312'-2317', 2370'-2374', 2377'-2383', 2407'-2413', 2416'-2419', 2515'-2522', 2559'-2561', 2817'-2819', 2840'-2860' one hole per foot); Records from 1/86 to 9/10 show that this well disposed of 33,654,635 BW with a maximum tubing pressure of 550 # . Note: this figure does not include the unreported water that was put away from 1975-1986. All perforations in the Duchesne River-Uintah formations.

In the Blue Bench 1-13 C5 the gross injection zones listed in the current well file from DOGM are: 4106'-4121', 4832'-4847', 5268'-5283', 6085'-6090', 7231'-7257',7467'-7528'. The well is currently a commercial SWD facility operated by Pro Water Inc. Current records show that over the last recorded 12 month interval the daily production has averaged about 6700 bbls a day.

Note: The closest offset SWD to the proposed IWM SWD 2-6 C5 is the Rhodes 1-36 B5 a converted SWD well.

In the Rhodes 1-36 B5 the gross injection zone intervals are: 4114' to 5055' the operators original plan was to perforate from 5070'-4583' (phase I) and if needed phase II would be from 4452'-4052' with the injection packer set 4520' for phase I. Records show that both phase I and phase II were perf'd and injected into. All perforations in the lower Uinta Fm/ upper Tgr.

The reservoirs that all of the injection wells are injecting in is composed primarily of clastic fluviatile, lacustrine, and transitional sediments and is composed of sandstones, siltstones and shales. Carbonates are also encountered increasing with depth with numerous sandstones containing waters of varying degrees of salinity, porosity and permeability.

Other close by wells that appear to be of a similar nature to the proposed IWM SWD 2-6 C4 include: the Tew 1-9 B5 a converted SWD well with a perforation interval of 3700-5800' and 5900-6400'. Also the Erich 2-11 B5 that has injected into 4 injection intervals: 3749-3985', 4027-4496,4576-5573',5607-5810'.

2.11 A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no conduit exists that could enable fluids to migrate up or down the wellbore and enter improper intervals.

There are no wells drilled within the 1/2 mile radius of the proposed IWM SWD 2-6 C4.

2.12 An affidavit certifying that a copy of the application has been provided to all operators or owners, and surface owners within a one-half mile radius of the proposed injection well.

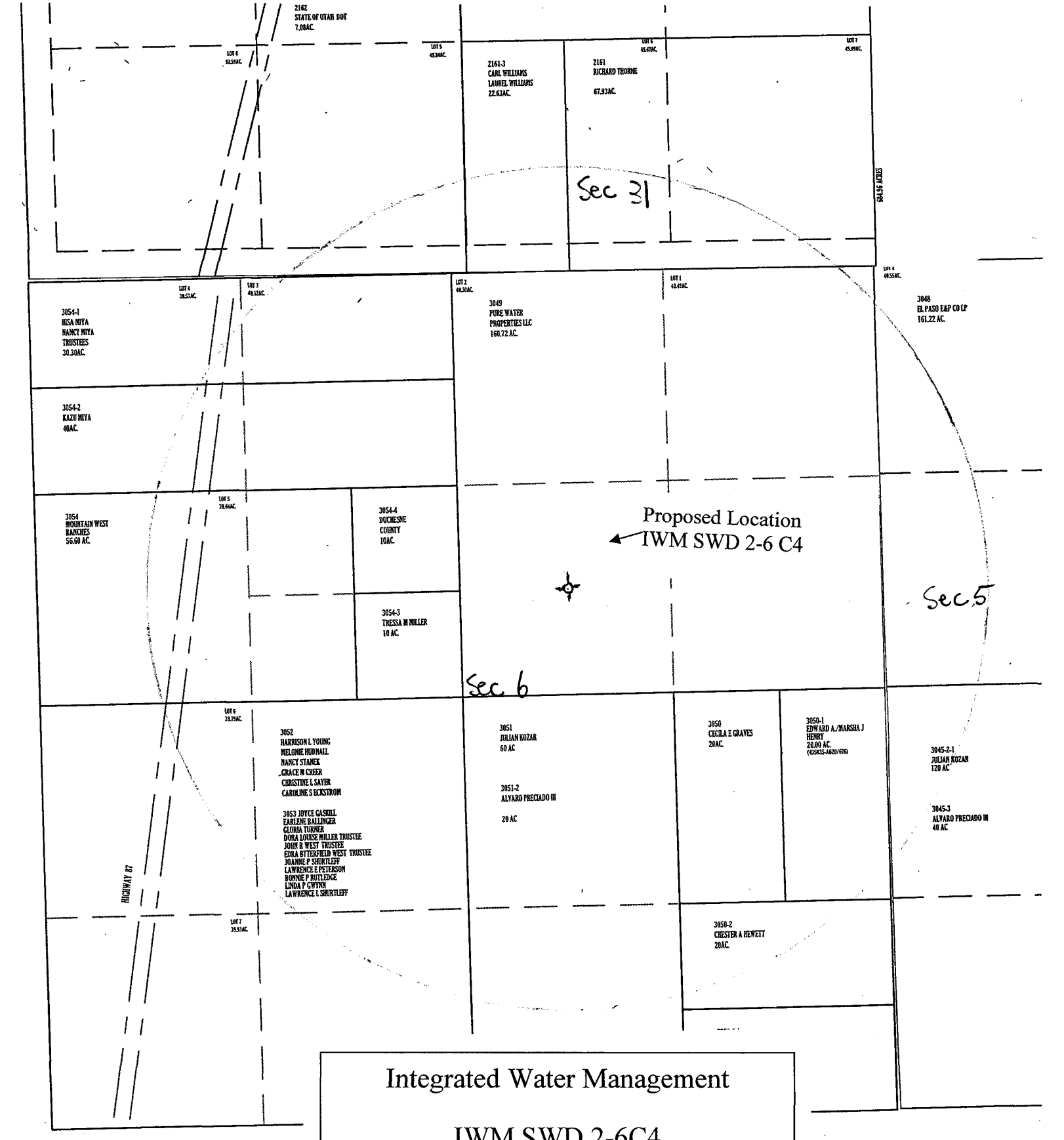
See Exhibit I.

List, Exhibit H.

2.13 Any other Information that the Board or Division may determine is necessary to adequately review the application.

The proposed injection zone is in the - Uintah Formation, upper Tgr fm. The IWM SWD 2-6 C4 well was patterned after the 1-36 B5 in closest in proximity to the IWM SWD 2-6 C4. The proposed injection zone will be determined by examination of the current well logs in the 1-6 C4 but if consistent with other nearby SWD wells (1-36 B5 as noted but also the Blue Bench 1-13 C5, the gross interval zones will be from 4000' to 7000'. The confining stratum directly above the injection zone is the Duchesne River formation and below the injection zones is the Green River Formation.

Integrated Water Management will supply any additional information requested by the Utah Division of Oil, Gas and Mining.



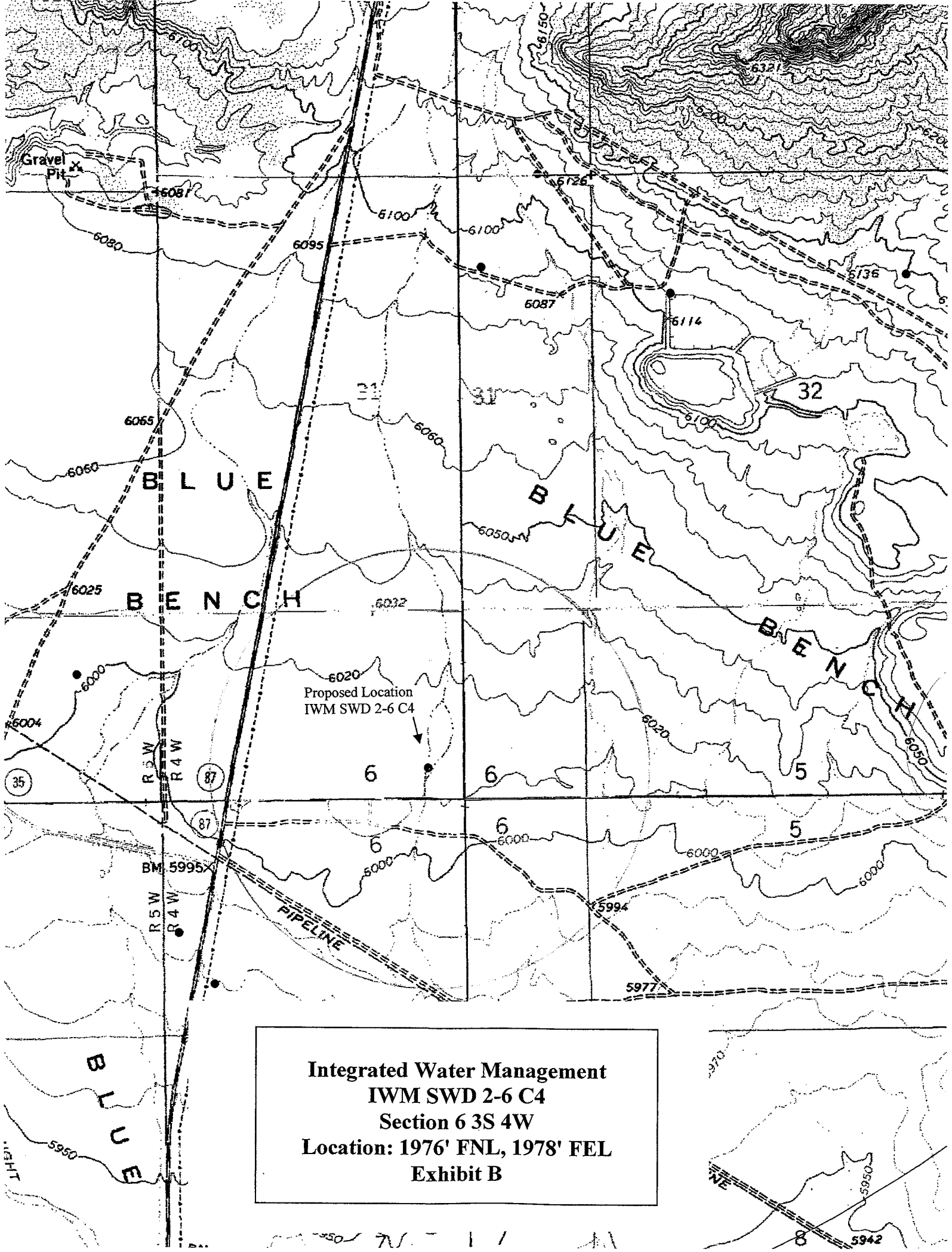
Integrated Water Management

IWM SWD 2-6C4

Section 6 3S 4W

Surface Owners within 1/2 Mile Radius

Exhibit A



Integrated Water Management
IWM SWD 2-6 C4
Section 6 3S 4W
Location: 1976' FNL, 1978' FEL
Exhibit B

IWM

Conversion Procedure EXHIBIT E

Gertiz-Murphy 1-6 C4 to be converted to IWM SWD 2-6 C4

SW NE Sec. 6, T3S-R4W

Duchesne, Co., Utah

API number 43-013-30573

KB 6034' GL 6011' TD: 11,900' (6/81) Original well Drilled by Gulf Oil

PBTD: 8250' CIBP (7/95)

Surface Casing: 9 5/8" @1502'

Intermediate csg: 7" 26/29# N-80 set @ 9900'

---

1. Weld on new wellhead on 9 5/8" in preparation to set BOP.
2. MIRU work over rig.
3. NU BOP.
4. Prepare to drill out first cement plug, top of cement at 1255'.
5. Drill to 1500' (bottom of 9 5/8" casing). Add stabilizers in preparation of drilling additional 23' to 7" casing stub.
6. Locate 7" casing stub, wash over and mill to top dress.
7. Run casing patch, test casing patch; if OK run remainder of casing to surface.
8. Pressure test with rig pump.
9. Drill remainder of cement plug in 7", estimated to be to 1620' (total thickness of cement 365').
10. Drill cement plug out from 3181 to 3398 in 7". Pressure test with rig pump.
11. Clean out hole in preparation to squeeze cement behind 7". Note: CBL shows cement top at approximately 5920'.

12. TIH and perforate 7" casing in preparation to sqz at 5900'
13. Test and establish an injection rate with rig pump; looking for rates of 3-4 bbl a minute.
14. If OK Set cement retainer just above uppermost perfs.
15. TIH and sqz with 400 sks, 30% excess to a height of about 3500'
16. Allow cement to cure and run CBL to confirm overall cement job and determine cement top.
17. If cement job is adequate and cement top is as planned perforate selected intervals from 4000' to 7000'.
18. TIH with 3 1/2" tubing and set Arrow set pkr, 50' above top perfs.
19. Rig to swab and swab representative water sample.
20. TOH remove BOP and prepare well for injection.

INSPECTION FORM 7

STATE OF UTAH
DIVISION OF OIL GAS AND MINING

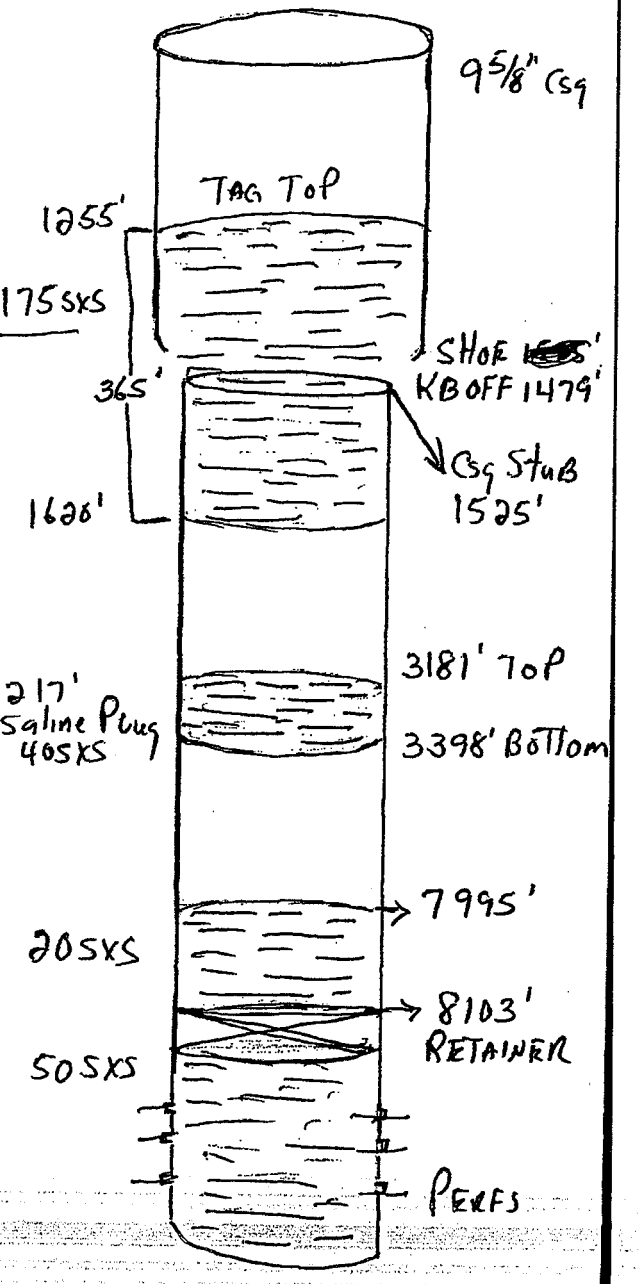
PLUGGING OPERATIONS

Well Name: GERITZ MURPHY 1-6C4 API Number: 43-013-30573
Qtr/Qtr: SW/NE Section: 6 Township: 3S Range: 4W
Company Name: BARRETT RESOURCES

Lease: State _____ Fee YES Federal _____ Indian _____
Inspector: DENNIS L. INGRAM Date: 6/22/99

Casing Tested: YES X NO _____ Results: 1000 PSI F/15 MINUTES--OK!
Cementing Company: BASIN CONCRETE

Draw a wellbore diagram as plugged:



COMMENTS: SET RETAINER WITH 260 JOINTS TUBING. INJECTION RATE WAS 1.67 BPM @ 400 PSI. TUBING TAIL FOR SALINE PLUG WAS 3398'. CASING STUB WAS 1525'. TAGGED SHOE PLUG WITH TUBING AND TAG SHOE. LEFT TOP PLUG OUT AT LANDOWNER REQUEST FOR WATER WELL-- SEE DIAGRAM

Exhibit C

- Exhibit D -

- Form OGCC-3

SUBMIT IN DUPLICATE*

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

(See other instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: Gulf Oil Corporation

3. ADDRESS OF OPERATOR: P.O. Box 2619, Casper, WY 82602-2619

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 1976'FNL & 1978'FEL, Sec. 6-3S-4W, SW/4, NE/4
At top prod. interval reported below Same
At total depth Same

OCT 26 1981

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME: Geritz Murphy

9. WELL NO.: 1-6-C4

10. FIELD AND POOL, OR WILDCAT: Wasatch, Altamont Field

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 6-3S-4W

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-013-30573	5-8-81	Duchesne	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
5-1-81	6-12-81	9-27-81	6034'KB, 6011'GL	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
11,900	11,855 PBTD		→	0-TD	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
Wasatch- 10,770'-10,780', 10,752'-10,758', 10,682'-10,668', 10,670'-10,674', 10,658'-10,662', 10,640'-10,648', 10,626'-10,630', 10,606'-10,618', 10,564'-10,567'

25. WAS DIRECTIONAL SURVEY MADE

26. TYPE ELECTRIC AND OTHER LOGS RUN
DIL/SFL, CNFD, BHC, CPL, G/CCL/CBL, Temp Spinner, State Temp Survey

27. WAS WELL CORED: NO

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"		50'			
9 5/8"	36	1502'	14 3/4"	650 sxs	
7"	29, 26	9900'	8 3/4"	850 sxs	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
5"	9594.66	11,897	325	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	9708	9397'

31. PERFORATION RECORD (*Interval, size and number*)
See Attached Sheet

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
See Attached Sheet	

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
8-25-81	Flowing	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9-27-81	24 hrs	50/64"		268	365	5	1362

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
100psi			268	365	5	45.5

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
Currently being flared pending Sales Contract.

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
List of Perforations and Acid Jobs.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED E A McKinnon TITLE Area Engineer DATE Oct. 22, 1981

*(See Instructions and Spaces for Additional Data on Reverse Side)

NALCO

1465 East 1650 south Vernal UT 84078 (435) 789-2069 www.nalco.com

Water Analysis Report

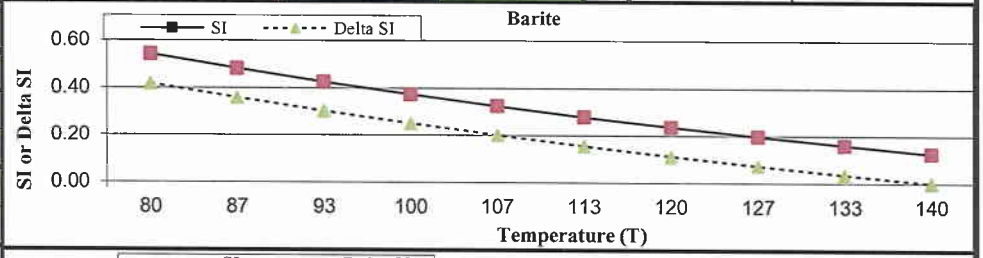
Field :	**Newfield**	**Sample Date :**	**4/18/2010**
County :		**Formation :**	
Location :	FENCELINE 2-23-8-16	**Rock Type :**	
Lab ID :		**Depth :**	**Analysed Date: 1/5/2011**
Comments :			

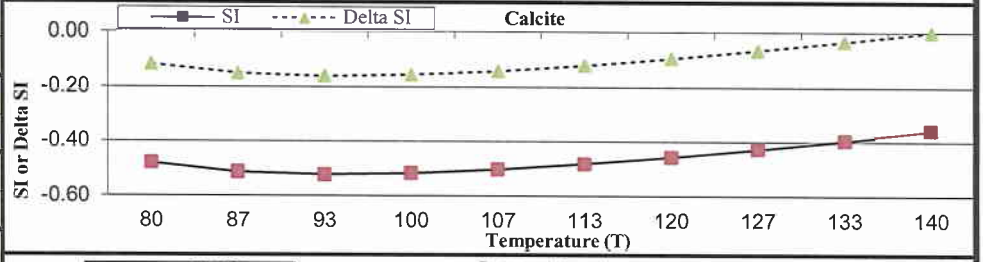
CATIONS	mg/l
Potassium	42.8
Sodium	6,776.3
Calcium	8.2
Magnesium	2.3
Iron	1.2
Barium	13.0
Strontium	0.0
SUM +	**6,843.8**

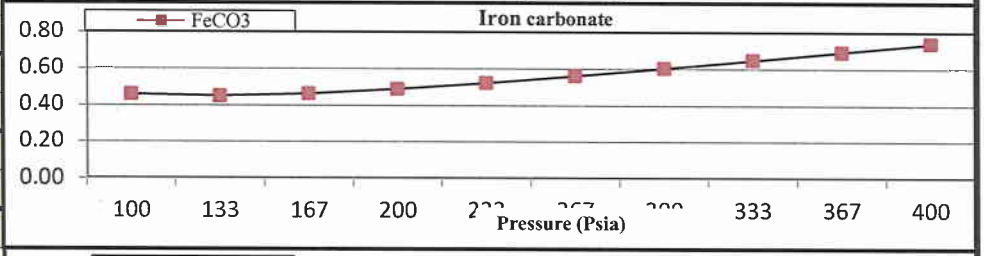
	Measured	Calculated
Total Dissolve Solid	17205.00	0.00
Total Hardness		29.93
PH	8.27	0.00
Total H2S aq	0.00	0.00
Manganese	1.38	
PO4 Residual	0.00	
SRB Vials Turned	-	
APB Vials Turned	-	

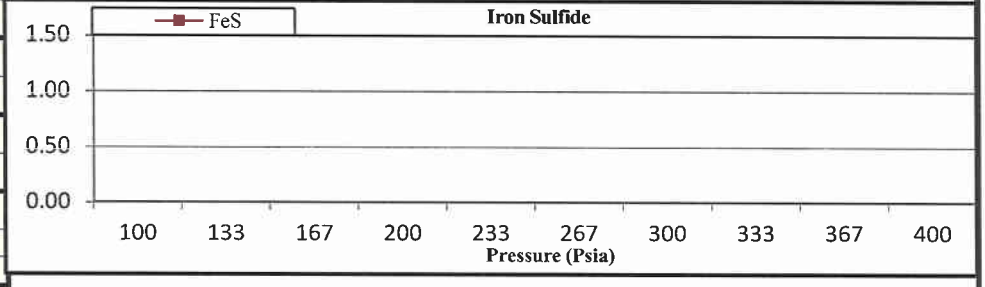
ANIONS	mg/l
Sulfate	10.0
Chloride	10,000.0
Carbonate	0.0
Bicarbonate	878.4
Bromide	0.0
Organic Acids	0.0
Hydroxide	0.0
SUM -	**10,888.4**

Initial(BH)	Final(WH)
Saturation Index values	
Calcite ($CaCO_3$)	
-0.36	-0.48
Barite ($BaSO_4$)	
0.12	0.54
Halite (NaCl)	
-3.01	-2.96
Gypsum	
-4.34	-4.35
Hemihydrate	
-4.90	-5.11
Anhydrite	
-4.32	-4.59
Celestite	
0.00	0.00
Iron Sulfide	
0.00	0.00
Zinc Sulfide	
0.00	0.00
Calcium fluoride	
0.00	0.00
Iron Carbonate	
0.74	0.46
Inhibitor needed (mg/L)	
Calcite	**NTMP**
0.00	0.00
Barite	**BHPMP**
0.00	0.00









Lab Manager: Andrea Craig

Analysis by:

Exhibit F-1

NALCO

1465 East 1650 south Vernal UT 84078 (435) 789-2069 www.nalco.com

Water Analysis Report

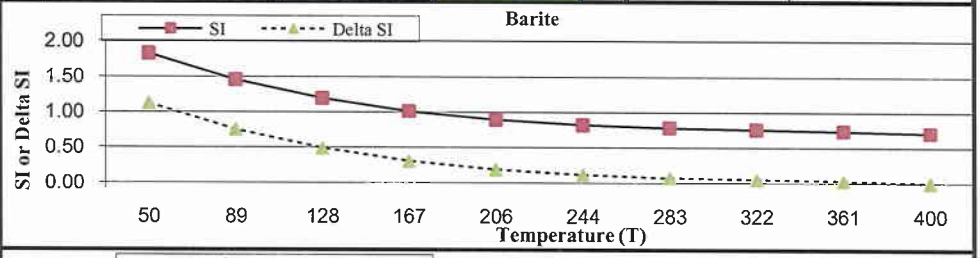
Field :	**Barrett**	**Sample Date :**	**8/16/2010**
County :		**Formation :**	
Location :	Prickly Pear Fed #12-24-12-14	**Rock Type :**	
Lab ID :		**Depth :**	**Analysed Date: 2/16/2011**
Comments :			

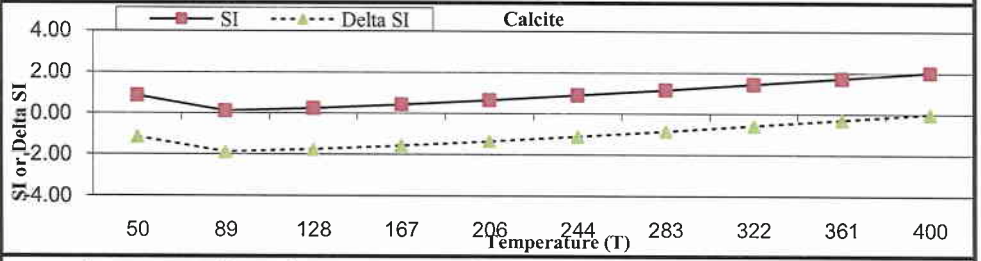
CATIONS	mg/l
Potassium	356.5
Sodium	15,909.1
Calcium	1,913.0
Magnesium	352.2
Iron	83.4
Barium	4.0
Strontium	0.0
SUM +	**18,618.2**

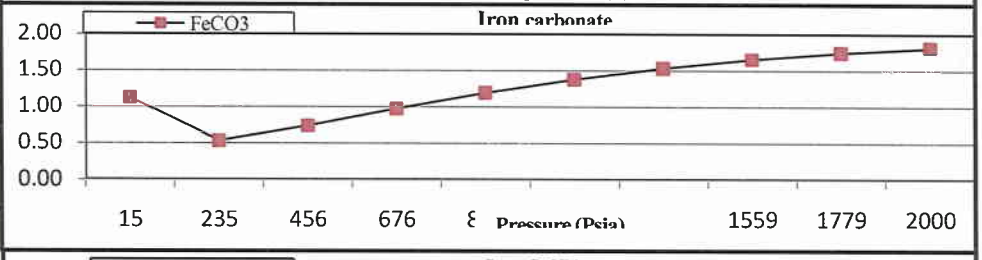
	Measured	Calculated
Total Dissolve Solid	48046.00	0.00
Total Hardness		6226.52
PH	6.79	0.00
Total H2S aq	0.00	0.00
Manganese	0.12	
PO4 Residual	0.00	
SRB Vials Turned	0.00	
APB Vials Turned	0.00	

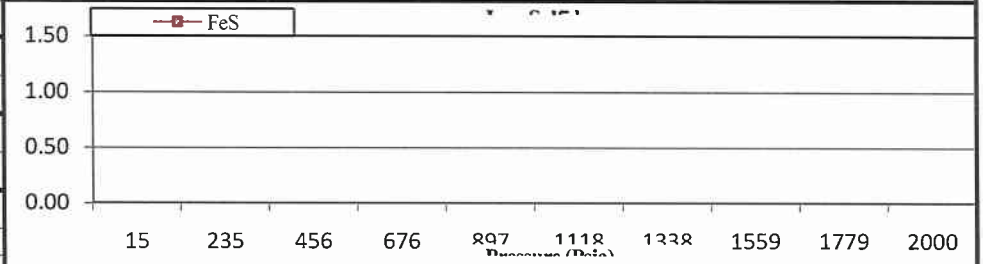
ANIONS	mg/l
Sulfate	1,040.0
Chloride	27,900.0
Carbonate	0.0
Bicarbonate	1,220.0
Bromide	0.0
Organic Acids	0.0
Hydroxide	0.0
SUM -	**30,160.0**

Initial(BH)	Final(WH)
Saturation Index values	
Calcite ($CaCO_3$)	
2.01	0.86
Barite ($BaSO_4$)	
0.70	1.82
Halite (NaCl)	
-2.08	-2.15
Gypsum	
-0.20	-0.42
Hemihydrate	
0.85	-1.21
Anhydrite	
1.28	-0.75
Celestite	
0.00	0.00
Iron Sulfide	
0.00	0.00
Zinc Sulfide	
0.00	0.00
Calcium fluoride	
0.00	0.00
Iron Carbonate	
1.81	1.12
Inhibitor needed (mg/L)	
Calcite	**NTMP**
105.51	0.00
Barite	**BHPMP**
8.91	0.65









Lab Manager: Andrea Craig

Analysis by:

Exhibit F-2

Production Water Report and Scaling Tendencies

Creg Wilkins 12/17/2003 Version : 947

Analysis by :	Creg Wilkins
Field :	
County :	Uintah
Lab ID# :	El Paso Production
Sample Date :	13-Apr-09
Location :	2-9B4
Formation :	
Depth :	
Rock Type:	
Porosity:	
Permeability:	

INPUT Sample Temp °F :	60.0	INPUT TDS @180 °C, mg/L	54,491
INPUT Downhole Temp °F :	125.0	Calc TDS (less CO2), mg/L	54,491
INPUT Sample Press :	6.0	INPUT Resistivity @ 68°F	0.150
INPUT sample pH, su	10.00	Calculated Resistivity @ 68°F	0.150
Input mole % CO_2	0.04	Input Conductivity, µmhos/cm	66,667
pH resulting from CO_2	10.02	Calc Cond@25 °C, µmhos/cm	66,667
Calc Carbon Dioxide (Aq), mg/L	0.2	INPUT Density @ STP, g/mL	1.039
Carbon Dioxide, CO_2 mg/L	0.0	Calc Density @STP, g/mL	1.039
Total Sulfide, mg/L	6.0	MicroBiological - # of bottles turned	
Dissolved Oxygen, ppm		SRBs :	(1)
Dissolved Oxygen, ppb	0.0	Aerobic Bacteria :	(1)

K^+	172.0
Na^+	20,990.9
Na^+ by Diff	+ 0.00
Ca^{++}	60.0
Mg^{++}	378.2
Fe^{++}	3.8
Ba^{++}	125.0
Sr^{++}	0.0
Br^-	0.0
$SO_4^=$	1,600.0
Cl^-	30,000.0
$CO_3^=$	1,560.0
HCO_3^-	1,342.0
OH^-	0.0
Organic Acid	0.0

Note: Organic Acids as Acetate

Titrations - if values are placed in mls or digits - results will transfer to Water Report

Parameter	mls	Digits	Sample Size	Normality	Results
CO_2	0	0.0	100	3.636	
H_2S	0	0.0	10	0.3998	
T reading	0	0.0	100	8.0	
P reading	0	0.0	100	1.6	
Ca^{++}	0	0.0	50	0.8	
THardness	0	0.0	50	0.8	
Cl^-	0	0.0	1	2.256	

Comments: Mn .45

Exhibit F-3

(A)

PARTIAL

75 085

PLEASE NOTE: Sample cannot be analysed until all blanks are filled in (Slip must accompany sample)

STATE OF UTAH
DEPARTMENT OF SOCIAL SERVICES
DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113

DO NOT WRITE HERE
Sample Received on
Analysis Authorization

WATER SAMPLE FOR CHEMICAL ANALYSIS ☒
WATER SAMPLE FOR RADIOLOGIC ANALYSIS ☐

SAMPLE COLLECTED FROM: (check one)

Stream ☐ Spring ☐ Well ☒
City or Town water distribution system ☐
Other ☐ (describe) WASTE WATER INJECTION WELL

EXACT DESCRIPTION OF SAMPLING POINT: (see note on reverse side) WELL NO. 2-2785 Sec 27, T2S, R5W (USM) DUCHESNE Co.

~~STATE ENGINEER'S APPLICATION OR CLAIM NO.~~ FROM PERFORATIONS AT 2817 to 2860 LEVEL.

SUPPLY OWNED BY:

PRESENT USE OF SUPPLY:

PROPOSED USE OF SUPPLY:

SAMPLE COLLECTED BY: CLEON FEIGHT, OIL & GAS DIV. DATE:

REPORT RESULTS TO: R. HINSHAW ~~RJH~~ PHONE:

Address: BLDG 72.

DO NOT WRITE BELOW DOUBLE LINE

RESULTS OF ANALYSIS

Turbidity		J.T.U.	Iron (total) as Fe		mg/l
Conductivity		micromhos/cm	Iron in filtered sample as Fe		mg/l
pH	7.70		Lead as Pb		mg/l
Total Dissolved Solids	15340	181340	Magnesium as Mg		mg/l
Alkalinity(total)as $CaCO_3$	11790	mg/l	Manganese as Mn		mg/l
Aluminum as Al		mg/l	Mercury as Hg		mg/l
Arsenic as As		mg/l	Nitrate as N		mg/l
Barium as Ba		mg/l	Nitrite as N		mg/l
Bicarbonate as HCO_3	3500	mg/l	Phosphate as PO_4		mg/l
Boron as B		mg/l	Phenols as Phenol		mg/l
Cadmium as Cd		mg/l	Potassium as K		mg/l
Calcium as Ca		mg/l	Selenium as Se		mg/l
Carbonate as CO_3		mg/l	Silica as SiO_2		mg/l
Chloride as Cl	80700	mg/l	Silver as Ag		mg/l
Chromium(hexavalent)as Cr		mg/l	Sodium as Na	70000	mg/l
Copper as Cu		mg/l	Sulfate as SO_4	220	mg/l
Cyanide as CN		mg/l	Surfactant as MBAS		mg/l
Fluoride as F		mg/l	Zinc as Zn	0.04	mg/l
Hardness(total) as $CaCO_3$	10	mg/l	Total Alpha		pci/l
Hydroxide as OH		mg/l	Total beta		pci/l
Ammonia N as NH_3					nci/l
					mg/l

SDH-San-49-Rev. 4/73

Exhibit G1-A

B-1

PARTIAL

75 086

PLEASE NOTE: Sample cannot be analysed until all blanks are filled in (Slip must accompany sample)

STATE OF UTAH
DEPARTMENT OF SOCIAL SERVICES
DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113

DO NOT WRITE HERE
Sample Received on JAN. 16 1975
Analysis Authorization

WATER SAMPLE FOR CHEMICAL ANALYSIS [X]
WATER SAMPLE FOR RADIOLOGIC ANALYSIS [ ]

SAMPLE COLLECTED FROM: (check one)

Stream [ ] Spring [ ] Well [X]
City or Town water distribution system [ ]
Other [ ] (describe) WASTE WATER INJECTION WELL

EXACT DESCRIPTION OF SAMPLING POINT: (see note on reverse side) WELL No. 2-27B5 SEC 27, T2S, R5W (USM) DUCHESNE CO.

~~STATE ENGINEER'S APPLICATION OR CLAIM NO.~~ FROM PERFORATIONS AT 2088 TO 2383 LEVEL

SUPPLY OWNED BY:

PRESENT USE OF SUPPLY:

PROPOSED USE OF SUPPLY:

SAMPLE COLLECTED BY: CLEON FEIGHT, OIL & GAS DIV. DATE:

REPORT RESULTS TO: R. WINSHAW RNA PHONE:

Address: BLDG 72.

DO NOT WRITE BELOW DOUBLE LINE

RESULTS OF ANALYSIS

Turbidity		J.T.U.	Iron (total) as Fe		mg/l
Conductivity	28,000	micromhos/cm	Iron in filtered sample as Fe		mg/l
pH	7.0		Lead as Pb		mg/l
Total Dissolved Solids	17,560	mg/l	Magnesium as Mg		mg/l
Alkalinity(total) as $CaCO_3$	4428	mg/l	Manganese as Mn		mg/l
Aluminum as Al		mg/l	Mercury as Hg		mg/l
Arsenic as As		mg/l	Nitrate as N		mg/l
Barium as Ba		mg/l	Nitrite as N		mg/l
Bicarbonate as HCO_3	2700	mg/l	Phosphate as PO_4		mg/l
Boron as B		mg/l	Phenols as Phenol		mg/l
Cadmium as Cd		mg/l	Potassium as K		mg/l
Calcium as Ca		mg/l	Selenium as Se		mg/l
Carbonate as CO_3		mg/l	Silica as SiO_2		mg/l
Chloride as Cl	8000	mg/l	Silver as Ag		mg/l
Chromium(hexavalent) as Cr		mg/l	Sodium as Na	7000	mg/l
Copper as Cu		mg/l	Sulfate as SO_4	500	mg/l
Cyanide as CN		mg/l	Surfactant as MBAS		mg/l
Fluoride as F		mg/l	Zinc as Zn		mg/l
Hardness(total) as $CaCO_3$	18	mg/l	Total Alpha		pci/l
Hydroxide as OH		mg/l	Total beta		pci/l
Ammonia N as NH_3					i/l
					mg/l

SDH-San-49-Rev. 4/73

Exhibit G-1-B

UTE RESEARCH LABORATORIES

P.O. Box 119 Fort Duchesne, Utah 84026 (801) 722-2254

LABORATORY NUMBER W-2129
SAMPLE TAKEN
SAMPLE RECEIVED 4-18-75
RESULTS REPORTED 4-18-75

SAMPLE DESCRIPTION FIELD NO.
COMPANY Husky Oil Co. LEASE Russell WELL NO. 2-32B4
FIELD Altamont COUNTY Duchesne STATE Utah
SAMPLE TAKEN FROM
PRODUCING FORMATION Duchesne River-Uinta TOP 2548-3726'
REMARKS

SAMPLE TAKEN BY Warren Johnston

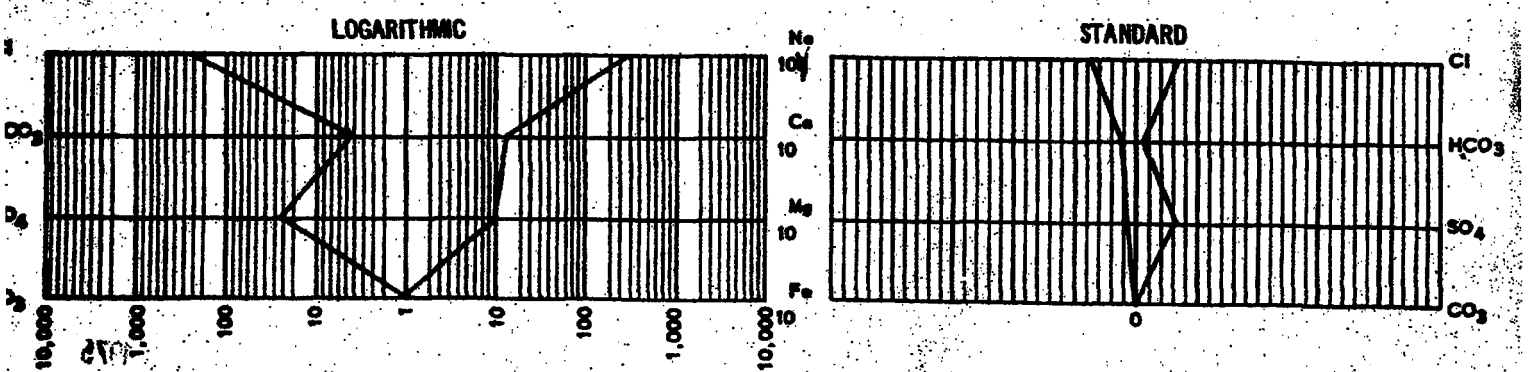
CHEMICAL AND PHYSICAL PROPERTIES

SPECIFIC GRAVITY @60/60° F. 1.0146 pH 8.28 RES. 0.30 OHM METERS @ 77°F

TOTAL HARDNESS 1155.47 mg/L as $CaCO_3$ TOTAL ALKALINITY 360.0 mg/L as $CaCO_3$

CONSTITUENT	MILLIGRAMS PER LITER mg/L	MILLEQUIVALENTS PER LITER MEQ/L		REMARKS
CALCIUM - Ca^{++}	273.0	13.65		
MAGNESIUM - Mg^{++}	114.0	9.34		
SODIUM - Na^{+}	8450.0	367.39		
BARIUM (INCL. STRONTIUM) - Ba^{++}	10.6	0.15		
TOTAL IRON - Fe^{++} AND Fe^{+++}	2.55	0.09	390.62	
BICARBONATE - HCO_3^{-}	360.0	5.90		
CARBONATE - CO_3^{--}	0	0		
SULFATE - SO_4^{--}	1500.0	31.25		
CHLORIDE - Cl^{-}	11695.3	329.45	366.69	
TOTAL DISSOLVED SOLIDS	20120.			

MILLEQUIVALENTS PER LITER



ANALYST
CHECKED

Exhibit G2-A

UTE RESEARCH LABORATORIES

P.O. Box 119 Fort Duchesne, Utah 84026 (801) 722-2254

LABORATORY NUMBER W-2123
SAMPLE TAKEN 4-17-75
SAMPLE RECEIVED 4-17-75
RESULTS REPORTED 4-17-75

SAMPLE DESCRIPTION FIELD NO.

COMPANY Husky Oil LEASE Russell WELL NO. 2-32B4

FIELD Altamont COUNTY Duchesne STATE Utah

SAMPLE TAKEN FROM

PRODUCING FORMATION Duchesne River-Uinta TOP 2464'-2470'

REMARKS

SAMPLE TAKEN BY

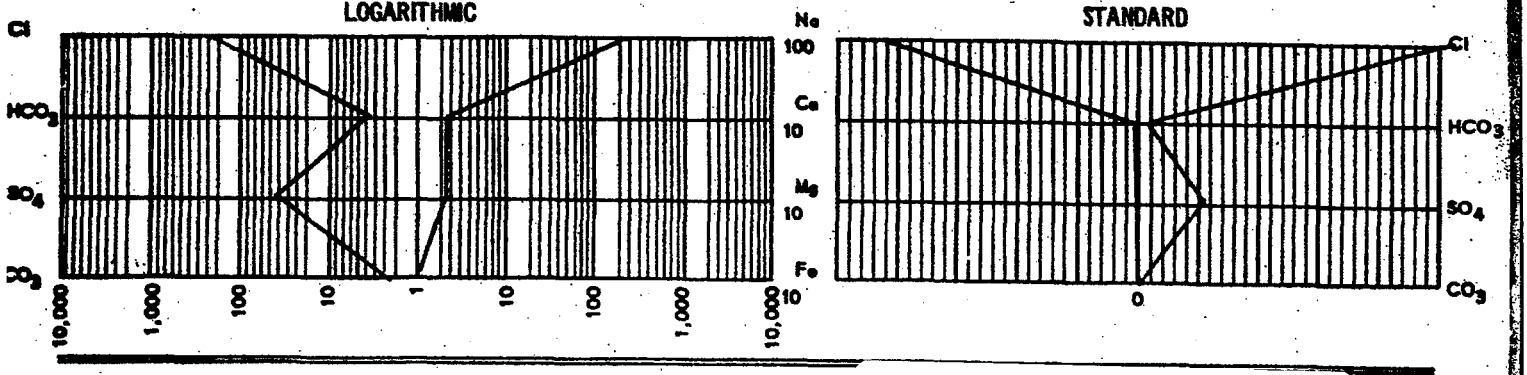
CHEMICAL AND PHYSICAL PROPERTIES

SPECIFIC GRAVITY @60/60° F. 1.0138 pH 8.91 RES. 0.50 OHM METERS @ 77°F

TOTAL HARDNESS 254.35 mg/L as $CaCO_3$ TOTAL ALKALINITY 352.0 mg/L as $CaCO_3$

CONSTITUENT	MILLIGRAMS PER LITER mg/L	MILLEQUIVALENTS PER LITER MEQ/L		REMARKS
CALCIUM - Ca ++	51.15	2.56		
MAGNESIUM - Mg ++	30.30	2.48		
SODIUM - Na +	4890.0	212.61		
BARIUM (INCL. STRONTIUM) - Ba ++	2.9	0.04		
TOTAL IRON - Fe++ AND Fe +++	1.07	0.04	217.73	
BICARBONATE - HCO_3^-	260.0	4.26		
CARBONATE - CO_3^{--}	92.0	3.07		
SULFATE - SO_4^{--}	2600.0	54.17		
CHLORIDE - CL^-	9596.2	270.32	331.82	
TOTAL DISSOLVED SOLIDS	17440.			

MILLEQUIVALENTS PER LITER



Al
Cl

Exhibit G2-B

UNICHEM
A Division of BJ Services

P.O. Box 217
Roosevelt, Utah 84066

Office (435) 722-5066
Fax (435) 722-5727

Exhibit G-3

WATER ANALYSIS REPORT

Company EL PASO Address _____ Date 5/24/01

Source 1-36B5 Date Sampled _____ Analysis No. _____

	Swab Sample Analysis		5/24/01 8:00 mg/l(ppm)		*Meg/l	
1. PH	11.6					
2. H_2S (Qualitative)	1.0					
3. Specific Gravity	1.060					
4. Dissolved Solids			66,564			
5. Alkalinity ($CaCO_3$)		CO_3	5,400	÷ 30	180	CO_3
6. Bicarbonate (HCO_3)		HCO_3		÷ 61		HCO_3
7. Hydroxyl (OH)		OH	3,230	÷ 17	190	OH
8. Chlorides (Cl)		Cl	30,100	÷ 35.5	848	Cl
9. Sulfates (SO_4)		SO_4	60	÷ 48	0	SO_4
10. Calcium (Ca)		Ca	1,600	÷ 20	80	Ca
11. Magnesium (Mg)		MG	0	÷ 12.2	0	Mg
12. Total Hardness ($CaCO_3$)			4,000			
13. Total Iron (Fe)			15.0			
14. Manganese			0.9			
15. Phosphate Residuals						

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

80	Ca	HCO_3	370	$Ca(HCO_3)_2$	81.04	80	6,483
0	Mg	SO_4	0	$CaSO_4$	68.07		
1,138	Na	Cl	848	$CaCl_2$	55.50		
				$Mg(HCO_3)_2$	73.17		
				$MgSO_4$	60.19		
				$MgCl_2$	47.62		
				$NaHCO_3$	84.00	290	24,360
				Na_2SO_4	71.03		
				NaCl	58.46	848	49,574

Saturation Values	Distilled Water 20°C
$CaCO_3$	13 Mg/l
$CaSO_4 \cdot 2H_2O$	2,090 Mg/l
$MgCO_3$	103 Mg/l

REMARKS Resistivity = 0.19 ohms/meter @ 76 degrees F 75 bbls recovered

Ammonia 580 ppm.

Jetco Chemicals, Inc.
A Procter & Gamble Co.

P.O. Box 217
Roosevelt, Utah 84066

Office (801) 722-5066
Fax (801) 722-5727

WATER ANALYSIS REPORT

COMPANY Genesis Production Company ADDRESS 1600 Stout St. #720 Denver CO 80202 DATE: 10-14

SOURCE Sample #2 Blue Bench 1-13 C5 DATE SAMPLED _____ ANALYSIS NO. _____

	Analysis	Mg/l (ppm)		*Meq/l	
1. PH	7.9				
2. H_2S (Qualitative)	.5				
3. Specific Gravity	1.043				
4. Dissolved Solids		47,585			
5. Suspended Solids					
6. Anaerobic Bacterial Count	CI C/Ml				
7. Methyl Orange Alkalinity ($CaCO_3$)					
8. Bicarbonate (HCO_3)	HCO_3	3,540	÷61	58	HCO_3
9. Chlorides (Cl)	Cl	26,000	÷35.5	732	Cl
10. Sulfates (SO_4)	SO_4	90	÷48	2	SO_4
11. Calcium (Ca)	Ca	360	÷20	18	Ca
12. Magnesium (Mg)	Mg	230	÷12.2	15	Mg
13. Total Hardness ($CaCO_3$)		1,850			
14. Total Iron (Fe)		4.0			
15. Barium (Qualitative)					
16. Phosphate Residuals					

- Exhibit G-4 -

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

18	Ca	HCO_3	58	
19	Mg	SO_4	2	
755	Na	Cl	732	

Compound	Equiv. Wt.	X Meq/l	= Mg/l
$Ca(HCO_3)_2$	81.04	18	1458
$CaSO_4$	68.07		
$CaCl_2$	55.50		
$Mg(HCO_3)_2$	73.17	19	1390
$MgSO_4$	60.19		
$MgCl_2$	47.62		
$NaHCO_3$	84.00	21	1764
Na_2SO_4	71.03	2	142
NaCl	58.46	732	42,793

Saturation Values	Distilled Water 20°C
$CaCO_3$	13 Mg/l
$CaSO_4 \cdot 2H_2O$	2,090 Mg/l
$MgCO_3$	103 Mg/l

REMARKS Swab sample from injection zone.

Landowner List- IWM SWD 2-6 C4 – Exhibit H

El Paso E&P Co. LP
PO Box 154
Houston, TX 77001

Pure Water Properties LLC
PO Box 982993
Park City, UT 84098

Graves, Ceclia E.
7824 Woodhall Ave.
Conoga Park, CA 91304

Kozar, Julian
Amber Financial Group (MPO)
11415 W. Bernardo Ct.
San Diego, CA 92127

Young, Harrison L.
PO Box 3560
Running Springs, CA 92382

West, John R. Trustee
1518 Homecoming Ave
South Jordan, UT 84095

Barraza, Yesenia E. (J/T)
900 W. Bitner Rd #B-32
Park City, UT 84098

Preciado, Alvaro III
Amber Financial Group (MPO)
11415 W. Bernardo Ct.
San Diego, CA 92127

Berry, Lee B/Jan A Trustees
3410 Palm Grove Dr.
Lake Havasu City, AZ 86404

Hewett, Chester A.
PO Box 313
Sunland, CA 91041

Miya, Hisa/Nancy Trustee
11916 Aneta St.
Culver City, CA 90230

Miya, Kazu
12112 Havelock Ave
Culver City CA 90230

Miller, Tressa M
1590 Cumbre Rd.
Paso Robles, CA 93446

Duchesne County
PO Box 910
Duchesne, UT 84021

Exhibit I

BEFORE THE DOGM in and for the STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF IWM SEEKING
FOR ADMINISTRATIVE APPROVAL,
PURSUANT TO RULE C-11, AUTHORIZING THE CONVERSION OF A PREVIOUSLY PLUGGED AND ABOUNDED WELL (THE GERITZ-MURPHY 1-6 C4) TO AN INJECTION WELL AND THE UNDERGROUND DISPOSAL OF
WATER PRODUCED AS A BY PRODUCT OF OIL AND GAS
PRODUCTION

CERTIFICATE of MAILING

State of Utah
County of Duchesne

Robert L. Ballou, Agent for applicant, Integrated Water Management, deposes and affirms that on January 19, 2012 he caused to be deposited in the US mail, copies of the application as directed by the DOGM for the above entitled matter to the list referred to as Exhibit "H", and that the addresses given in that exhibit are correct to the best of the affiant's information and belief; such exhibit includes all lease holders, offset operators and surface owners within a 1/2 mile radius of the proposed SWD described in the application.

Robert L. Ballou PG -Consultant

Subscribed and sworn to ~~before me~~ this 19 day of January 2012.

My commission expires: 09/13/15

NOTARY PUBLIC
ANNETTE F PULLIN
613537
COMMISSION EXPIRES
SEPTEMBER 13, 2015
STATE OF UTAH

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

ONE YEAR
UNDERGROUND INJECTION CONTROL PERMIT
Cause No. UIC-378.1

Operator: Integrated Water Management, LLC

Well: IWM SWD 3-30 B4

Location: Section 30, Township 2 South, Range 4 West, USM

County: Duchesne

API No.: 43-013-50753

Well Type: Saltwater Disposal

Stipulations of Permit Approval

1. Approval for conversion to Injection Well issued on **October 26, 2011**
2. Maximum Allowable Injection Pressure: 736 psig
3. Maximum Allowable Injection Rate: (restricted by pressure limitation)
4. Injection Interval: Lower Uinta Formation (4,063' – 5,130')
5. A Radioactive Tracer Survey is to be run one year after date of this injection approval, in order to demonstrate which perforated zones are accommodating water.
6. Maximum Cumulative Injection Volume: 6.7x 10^6 barrels; to be re-evaluated after the results of the RAT survey.
7. The off-setting well (Christman-Bland 1-31B4, 43-013-30198) shall be monitored on a weekly basis and reported to the Division monthly. In the event that pressure changes are noted, **Injection Shall Cease Immediately** and the Division shall be notified.

Approved by: _____ 03-15-2012
John Rogers
Associate Director
Date

JR/AM/js
cc: Bruce Suchomel, Environmental Protection Agency
Duchesne County
El Paso E&P Company
Well File
N:\O&G Permits\Injection Permits\Integrated Water Mng

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114 -5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: N/a

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/a

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: N/a

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER SWD

8. WELL NAME and NUMBER: IWM 3-30-B4

2. NAME OF OPERATOR: Integrated Water Management

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: 20250west 2000 South CITY Duchesne STATE Ut ZIP 84021

PHONE NUMBER: (435) 454-4646

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 6130'

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: S41 30 2s 4w u

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☑ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 6/22/2012	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 6/22/2012	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

On June 22nd we pumped 500 Gallons of Acid followed by 90 bbls of fresh water down the 3-30 B4SWD well. We shut the well in for 11 hrs after the acid was pumped. The acid was injected into the wells perfs from 4063'-5130'.

NAME (PLEASE PRINT) Nate Robinson TITLE Operations Manager

SIGNATURE [signature] DATE 6/28/2012

(This space for State use only)

RECEIVED
JUN 28 2012
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	N/A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	N/A
7. UNIT or CA AGREEMENT NAME:	PRIVATE FEE
1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER SWD	8. WELL NAME and NUMBER: IWM SWD 3-30B4
2. NAME OF OPERATOR: Integrated Water Management	9. API NUMBER: 4301350753
3. ADDRESS OF OPERATOR: Po box 430 CITY Altamont STATE Ut ZIP 84007	PHONE NUMBER: (435) 454-4646
	10. FIELD AND POOL, OR WILDCAT: ALTAMONT

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 300' southline 800' east line COUNTY: DUCHESNE

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: sese 30 2s 4W U STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☑ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 3/13/2013	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: rat test
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Shut well in on 3-10-13 till morning of the 11th then pumped 1650 gallons of 15% acid down swd well. Left well shut in for 24 hrs then pumped approx 4000 bbls through out the night in to displace acid. morning of the 13th brought in PLS to complete the RAT survey. RAT survey has been completed, and digital results have been emailed to Ammon McDonald

NAME (PLEASE PRINT) Nate Robinson TITLE Operations Manager

SIGNATURE DATE 3/13/2013

(This space for State use only)

RECEIVED
MAR 13 2013
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

Nalco Laboratory
1465 East 1650 South Vernal UT 84078
Phone: (435) 789-2069 Email: customeranalyticalservices@nalco.com

NALCO An Ecolab Company | ECOLAB

Final - Report Number: 820718
INTEGRATED WATER MANAGEMENT
20250 W 2000 S
DUCHESNE UT 84021 USA
Sold To: 0500068849 **Ship To:** 0500068849
Representative: Joe E Meeks

Sample Number	ACW009089
Date Sampled	20-Feb-2013
Date Received	21-Feb-2013
Date Completed	21-Feb-2013
Date Authorized	21-Feb-2013

IWM SWD

Analytical Report

This sample was analyzed as received, the results being as follows:

Sampling point: INJECTION 3-30 B4

43-013-50753
2S 4W 30

Water

Cations - Metals	Test Method	Total
Aluminum (Al)		<1.5 mg/L
Antimony (Sb)		<5 mg/L
Barium (Ba)		2.4 mg/L
Boron (B)		19 mg/L
Calcium (Ca)		150 mg/L
Calcium (CaCO3)		370 mg/L
Chromium (Cr)		<0.8 mg/L
Cobalt (Co)		0.7 mg/L
Copper (Cu)		<1.5 mg/L
Iron (Fe)		8.1 mg/L
Lead (Pb)		<5.0 mg/L
Lithium (Li)		3.1 mg/L
Magnesium (Mg)		38 mg/L
Magnesium (CaCO3)		160 mg/L
Manganese (Mn)		0.4 mg/L
Molybdenum (Mo)		<2.0 mg/L
Nickel (Ni)		<0.5 mg/L
Phosphorus (P)		7.0 mg/L
Potassium (K)		1100 mg/L
Silicon (Si)		25 mg/L
Silica (SiO2)		53 mg/L
Sodium (Na)		5400 mg/L
Sodium (CaCO3)		12000 mg/L
Strontium (Sr)		8.4 mg/L
Titanium (Ti)		<0.5 mg/L
Vanadium (V)		<0.5 mg/L
Zinc (Zn)		<0.5 mg/L
Total Hardness (CaCO3)		530 mg/L

Alkalinity	Test Method	Total
Bicarbonate (CaCO3)		2700 mg/L
Bicarbonate (HCO3)		3300 mg/L

Tasia Hamann

Authorized by Tasia D Hamann

RECEIVED
MAR 13 2013
DIV. OF OIL, GAS & MINING

Nalco Laboratory
1465 East 1650 South Vernal UT 84078
Phone: (435) 789-2069 Email: customeranalyticalservices@nalco.com

NALCO An Ecolab Company | ECOLAB

Final - Report Number: 820718
INTEGRATED WATER MANAGEMENT
20250 W 2000 S
DUCHESNE UT 84021 USA
Sold To: 0500068849 **Ship To:** 0500068849
Representative: Joe E Meeks

Sample Number	ACW009089
Date Sampled	20-Feb-2013
Date Received	21-Feb-2013
Date Completed	21-Feb-2013
Date Authorized	21-Feb-2013

Analytical Report

This sample was analyzed as received, the results being as follows:

Sampling point: INJECTION 3-30 B4 43-013-50753

Physical	**Test Method**	**Total**
Conductivity at 25°C		28000 µS/cm
Resistivity		0.356 Ohms-M
Total Cations		6687 mg/L
Total Anions		12077.2 mg/L
pH @ 25°C		7.9 pH

Field Analysis	**Test Method**	**Total**
WELLHEAD		

Inorganic Constituents	**Test Method**	**Total**
Chloride (Cl)		8900 mg/L
Sulfate (SO4)		480 mg/L

Product Residuals	**Test Method**	**Total**
04VD008		640 mg/L

Tasia Hamann

Authorized by Tasia D Hamann

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

ONE YEAR
UNDERGROUND INJECTION CONTROL PERMIT
Cause No. UIC-378.1

Operator: Integrated Water Management, LLC

Well: IWM SWD 3-30 B4

Location: Section 30, Township 2 South, Range 4 West, USM

County: Duchesne

API No.: 43-013-50753

Well Type: Saltwater Disposal

Stipulations of Permit Approval

1. Approval for conversion to Injection Well issued on **October 26, 2011.**
2. Maximum Allowable Injection Pressure: 736 psig
3. Maximum Allowable Injection Rate: (restricted by pressure limitation)
4. Injection Interval: Lower Uinta Formation (4,063' – 5,130')
5. A Radioactive Tracer Survey is to be run one year after date of this injection approval, in order to demonstrate which perforated zones are accommodating water.
6. Maximum Cumulative Injection Volume: 6.7x 10^6 barrels; to be re-evaluated after the results of the RAT survey.
7. The off-setting well (Christman-Bland 1-31B4, 43-013-30198) shall be monitored on a weekly basis and reported to the Division monthly. In the event that pressure changes are noted, **Injection Shall Cease Immediately** and the Division shall be notified.

Approved by: _____ 03-15-2013
John Rogers Date
Associate Director

JR/AM/js
cc: Bruce Suchomel, Environmental Protection Agency
Duchesne County
EP Energy E&P Company
Well File
N:\O&G Permits\Injection Permits\Integrated Water Mng

UTAH DNR
OIL, GAS & MINING

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

ONE YEAR
UNDERGROUND INJECTION CONTROL PERMIT
Cause No. UIC-378.1

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Well: IWM SWD 3-30 B4

Location: Section 30, Township 2 South, Range 4 West, USM

County: Duchesne

API No.: 43-013-50753

Well Type: Saltwater Disposal

Stipulations of Permit Approval

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6. Maximum Cumulative Injection Volume: 6.7x 10^6 barrels; to be re-evaluated after the results of the RAT survey.
7. The off-setting well (Christman Bland 1-31B4, 43-013-30198) shall be monitored on a weekly basis and reported to the Division monthly. In the event that pressure changes are noted, **INJECTION SHALL CEASE IMMEDIATELY** and the Division shall be notified.

Approved by: _____ 03-15-2014
John Rogers
Associate Director
Date

JR/AM/js
cc: Bruce Suchomel, Environmental Protection Agency
Duchesne County
EP Energy E&P Company
Well File
N:\O&G Permits\Injection Permits\Integrated Water Mng

UTAH DNR OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 3691

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER:
IWM SWD 3-30 B4

2. NAME OF OPERATOR:
INTEGRATED WATER MANAGEMENT LLC

9. API NUMBER:
43013507530000

3. ADDRESS OF OPERATOR:
PO Box 430 , Altamont, UT, 84001

PHONE NUMBER:
435-454-4646 Ext

9. FIELD and POOL or WILDCAT:
ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0300 FSL 0800 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 30 Township: 02.0S Range: 04.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 11/3/2016	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIT passed with Success witnessed by Ammon McDonald 11-30-2016 leaving 500 mPSI on Backside of tubing. Will monitor daily

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
December 01, 2016

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Nathan Robinson	435 454-4646	Director
SIGNATURE		**DATE**
N/A		11/30/2016

RECEIVED: Nov. 30, 2016

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL — OIL WELL ☐ GAS WELL ☐ OTHER SWD 3-30B4

8. WELL NAME and NUMBER: IWM SWD 3-30 B4

2. NAME OF OPERATOR: IWM

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER: (435) 454-4646

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 0 02s 04W U

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 11/30/2016	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: 5 year MIT
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIT passed with success witnessed by Ammon McDonald 11-30-2016

Leaving 500 PSI on Backside of tubing. Will monitor and record Daily.

NAME (PLEASE PRINT) Nate Robinson TITLE Managing Director

SIGNATURE DATE 11/30/2016

(This space for State use only)

INSTRUCTIONS

This form shall be submitted by the operator to show the intention and/or completion of the following:

- miscellaneous work projects and actions for which other specific report forms do not exist;
- all other work and events as identified in section 11, Type of Action, or as required by the Utah Oil and Gas Conservation General Rules, including:
  - minor deepening of an existing well bore,
  - plugging back a well,
  - recompleting to a different producing formation within an existing well bore (intent only),
  - reperforating the current producing formation,
  - drilling a sidetrack to repair a well,
  - reporting monthly the status of each drilling well.

This form is not to be used for <u>proposals</u> to

- drill new wells,
- reenter previously plugged and abandoned wells,
- significantly deepen existing wells below their current bottom-hole depth,
- drill horizontal laterals from an existing well bore,
- drill hydrocarbon exploratory holes such as core samples and stratigraphic tests.

Use Form 3, Application for Permit to Drill (APD) for such proposals.

NOTICE OF INTENT - A notice of intention to do work on a well or to change plans previously approved shall be submitted in duplicate and must be received and approved by the division before the work is commenced. The operator is responsible for receipt of the notice by the division in ample time for proper consideration and action. In cases of emergency, the operator may obtain verbal approval to commence work. Within five days after receiving verbal approval, the operator shall submit a Sundry Notice describing the work and acknowledging the verbal approval.

SUBSEQUENT REPORT - A subsequent report shall be submitted to the division within 30 days of the completion of the outlined work. Specific details of the work performed should be provided, including dates, well depths, placement of plugs, etc.

WELL ABANDONMENT - Proposals to abandon a well and subsequent reports of abandonment should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, and method of parting of any casing, liner, or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

In addition to any Sundry Notice forms submitted, **Form 8, Well Completion or Recompletion Report and Log** must be submitted to the division to report the <u>results</u> of the following operations:

- completing or plugging a new well,
- reentering a previously plugged and abandoned well,
- significantly deepening an existing well bore below the current bottom-hole depth,
- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 3691

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER:
IWM SWD 3-30 B4

2. NAME OF OPERATOR:
INTEGRATED WATER MANAGEMENT LLC

9. API NUMBER:
43013507530000

3. ADDRESS OF OPERATOR:
PO Box 430 , Altamont, UT, 84001

PHONE NUMBER:
435-454-4646 Ext

9. FIELD and POOL or WILDCAT:
ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0300 FSL 0800 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 30 Township: 02.0S Range: 04.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 11/3/2016	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	✓ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Construction of 8 new tanks on the secondary containment berm in line west of the existing triplex feed tank to add additional storage capacity.

Approved by the Utah Division of Oil, Gas and Mining
December 06, 2016
Date:
By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Nathan Robinson	435 454-4646	Director
SIGNATURE		**DATE**
N/A		11/29/2016

RECEIVED: Nov. 29, 2016

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Water Disposal

8. WELL NAME and NUMBER: IWM SWD 3-30 B4

2. NAME OF OPERATOR: IWM

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER: (435) 454-4646

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800 FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 02S 04W U

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 11/3/2016	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☑ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Construction of 8 new tanks on the secondary containment berm in line west of the existing triplex feed tank to add additional storage capacity.

NAME (PLEASE PRINT) Nate Robinson TITLE Facility Manager

SIGNATURE DATE 11/6/2016

(This space for State use only)

INSTRUCTIONS

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WELL ABANDONMENT - Proposals to abandon a well and subsequent reports of abandonment should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, and method of parting of any casing, liner, or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

In addition to any Sundry Notice forms submitted, **Form 8, Well Completion or Recompletion Report and Log** must be submitted to the division to report the <u>results</u> of the following operations:

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- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 3691

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER:
IWM SWD 3-30 B4

2. NAME OF OPERATOR:
INTEGRATED WATER MANAGEMENT LLC

9. API NUMBER:
43013507530000

3. ADDRESS OF OPERATOR:
PO Box 430 , Altamont, UT, 84001

PHONE NUMBER:
435-454-4646 Ext

9. FIELD and POOL or WILDCAT:
ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0300 FSL 0800 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 30 Township: 02.0S Range: 04.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 12/12/2016	✓ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

2 tots of acid will be put down hole on 12/26/2016 it will sit for 12 hours and then flowback. 4 totes of acid will be put down hole on Tuesday 12/27/2016 and will sit for 12 hours and then flowback. Then the hole will be flushed with brine water

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
January 04, 2017

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Nathan Robinson	435 454-4646	Director
SIGNATURE		**DATE**
N/A		12/23/2016

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Water Disposal

8. WELL NAME and NUMBER: IWM SWD 3-30 B-4

2. NAME OF OPERATOR: Integrated Water Managment LLC

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER:

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 02S 04W U

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☑ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 12/26/2016	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

2 tots of acid will be put down hole on 12/26/2016 it will sit for 12 hours and then flowback.

4 totes of acid will be put down hole on Tuesday 12/27/2016 and will sit for 12 hours and then flowback.

Then the hole will be flushed with brine water

NAME (PLEASE PRINT) Nate Robinson TITLE Managing Director

SIGNATURE DATE 12/22/2016

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

INSTRUCTIONS

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  - reperforating the current producing formation,
  - drilling a sidetrack to repair a well,
  - reporting monthly the status of each drilling well.

This form is not to be used for <u>proposals</u> to

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Use Form 3, Application for Permit to Drill (APD) for such proposals.

NOTICE OF INTENT - A notice of intention to do work on a well or to change plans previously approved shall be submitted in duplicate and must be received and approved by the division before the work is commenced. The operator is responsible for receipt of the notice by the division in ample time for proper consideration and action. In cases of emergency, the operator may obtain verbal approval to commence work. Within five days after receiving verbal approval, the operator shall submit a Sundry Notice describing the work and acknowledging the verbal approval.

SUBSEQUENT REPORT - A subsequent report shall be submitted to the division within 30 days of the completion of the outlined work. Specific details of the work performed should be provided, including dates, well depths, placement of plugs, etc.

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Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL — OIL WELL ☐ GAS WELL ☐ OTHER Water Disposal

8. WELL NAME and NUMBER: IWM SWD 3-30 B-4

2. NAME OF OPERATOR: Integrated Water Managment LLC

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER:

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 02S 04W U

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 12/28/2016	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☑ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Change out tubing from 3.5 inches to 4.5 inch tubing. Tubing will be a11.6 #P110 LTC.

NAME (PLEASE PRINT) Nate Robinson TITLE Managing Director

SIGNATURE DATE 12/22/2016

(This space for State use only)

INSTRUCTIONS

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Send to:

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Phone: 801-538-5340

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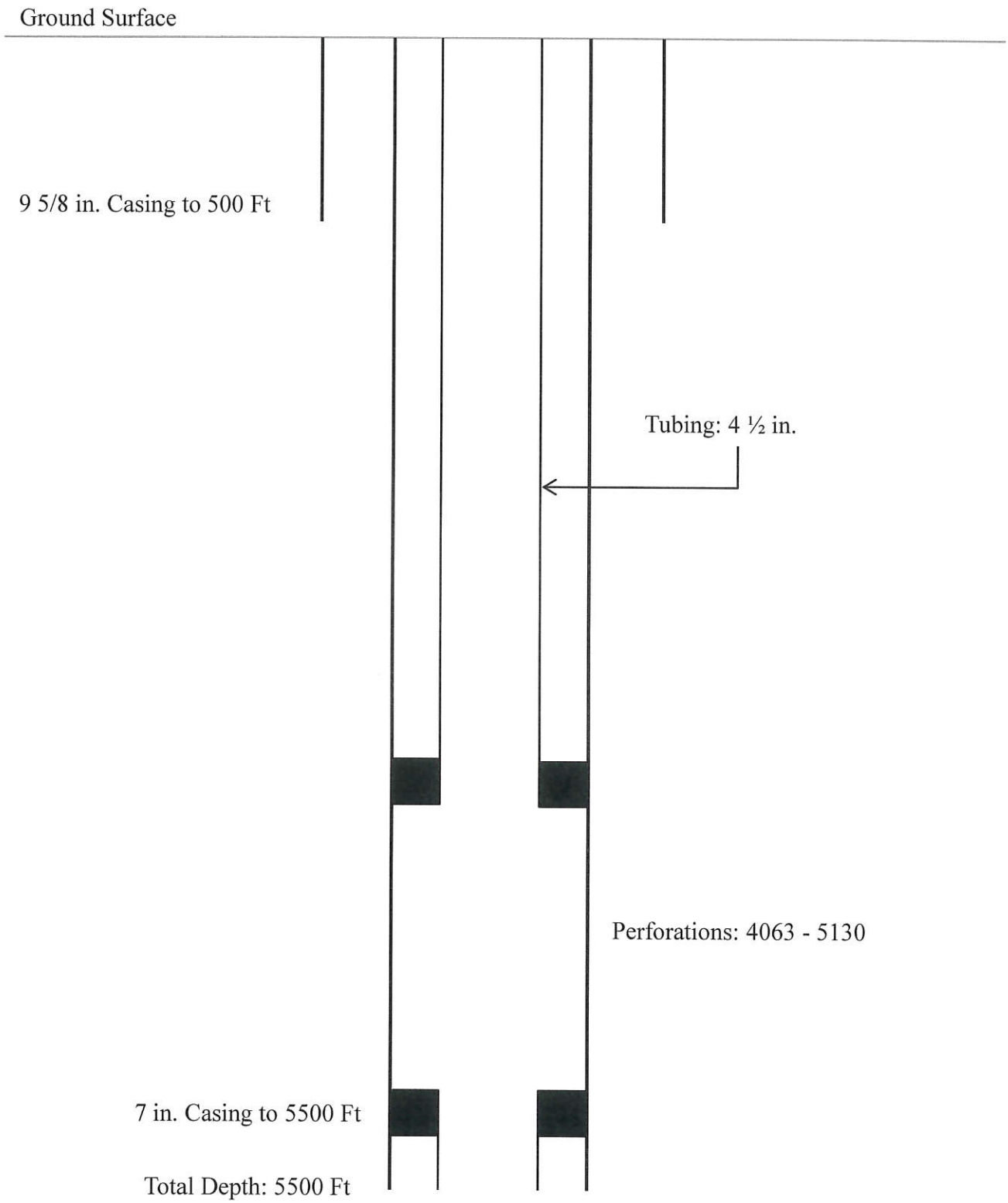

GeoStrata

Well Diagram

Integrated Water Management
Duchesne, UT

Plate 1

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: 3691

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER:
IWM SWD 3-30 B4

2. NAME OF OPERATOR:
INTEGRATED WATER MANAGEMENT LLC

9. API NUMBER:
43013507530000

3. ADDRESS OF OPERATOR:
PO Box 430 , Altamont, UT, 84001

PHONE NUMBER:
435-454-4646 Ext

9. FIELD and POOL or WILDCAT:
ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0300 FSL 0800 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 30 Township: 02.0S Range: 04.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 12/28/2016	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	✓ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Change out tubing from 3.5 inches to 4.5 inch tubing. Tubing will be a11.6 #P110 LTC.

Approved by the Utah Division of Oil, Gas and Mining

Date: January 04, 2017

By: Dark K Quist

Please Review Attached Conditions of Approval

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Nathan Robinson	435 454-4646	Director
SIGNATURE		**DATE**
N/A		12/23/2016

RECEIVED: Dec. 23, 2016

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43013507530000

MIT will need to be conducted once work is completed. NOTE: Per discussion 1/3/2017, this change of plan will more than likely not take place and another request will be made to isolate the casing issues below 3600'.

RECEIVED: Jan. 04, 2017

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Water Disposal

8. WELL NAME and NUMBER: IWM SWD 3-30 B-4

2. NAME OF OPERATOR: Integrated Water Managment LLC

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER:

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 02S 04W U

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NAME (PLEASE PRINT) Nate Robinson TITLE Managing Director

SIGNATURE DATE 12/22/2016

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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
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FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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7. UNIT or CA AGREEMENT NAME:

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8. WELL NAME and NUMBER: IWM SWD 3-30 B-4

2. NAME OF OPERATOR: Integrated Water Managment LLC

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER:

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 02S 04W U

STATE: UTAH

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☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
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SIGNATURE DATE 12/22/2016

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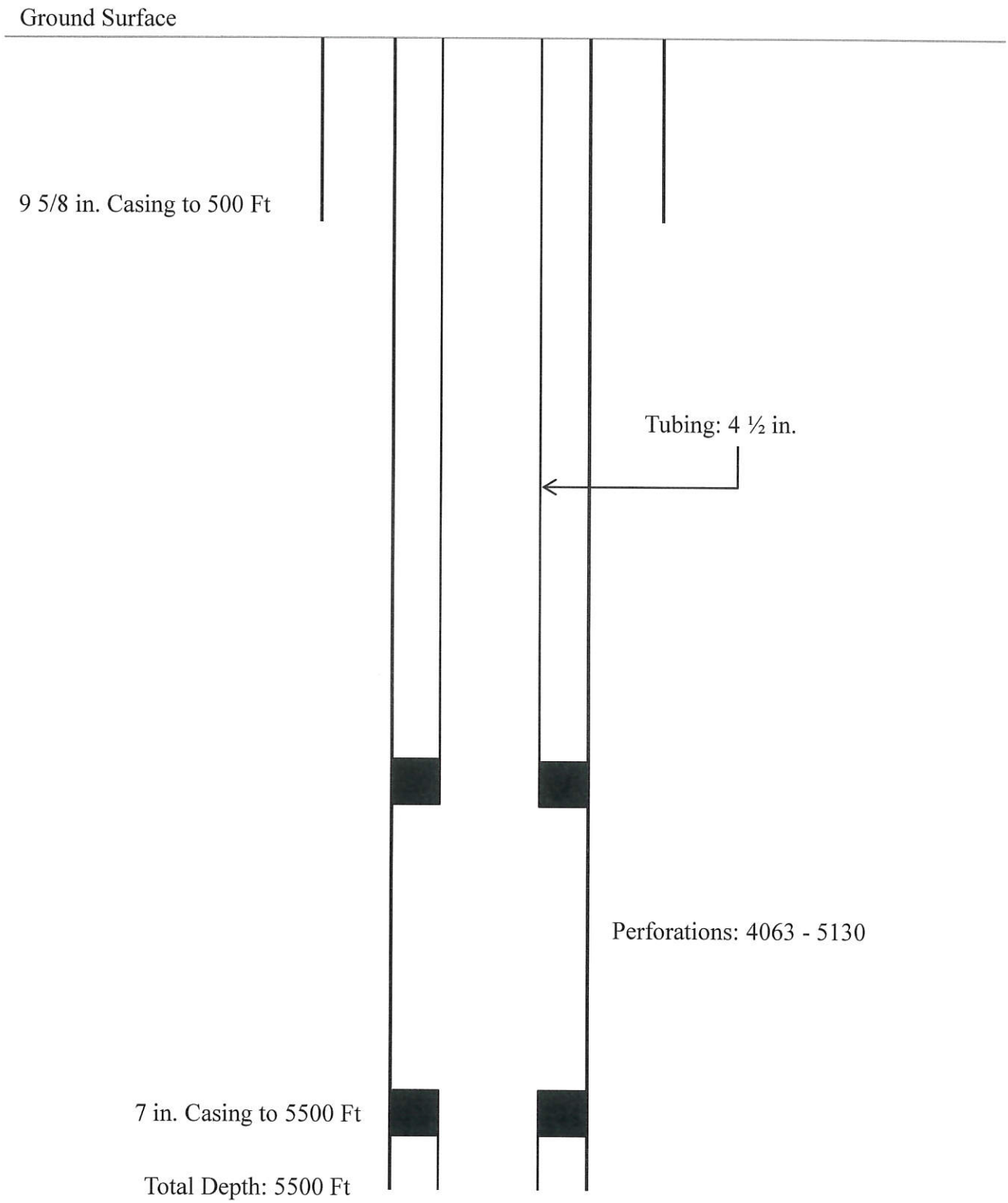

GeoStrata

Well Diagram

Integrated Water Management
Duchesne, UT

Plate 1

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 3691

SUNDRY NOTICES AND REPORTS ON WELLS

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7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER:
IWM SWD 3-30 B4

2. NAME OF OPERATOR:
INTEGRATED WATER MANAGEMENT LLC

9. API NUMBER:
43013507530000

3. ADDRESS OF OPERATOR:
PO Box 430 , Altamont, UT, 84001

PHONE NUMBER:
435-454-4646 Ext

9. FIELD and POOL or WILDCAT:
ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0300 FSL 0800 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 30 Township: 02.0S Range: 04.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 1/9/2017	☐ ACIDIZE	☐ ALTER CASING	✓ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	✓ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

1. Attempt to push fish to bottom was unsuccessful. The fish is an arrow set packer and 2 jts of 3 ½" tbg. We was not able to get the fish top past 4171'. IWM will have to leave the fish in the hole - other options is. 2. Fish moved to only 4171' 3. Recommendation moving forward for IWM 4. POOH W/ TBG & BHA. 5. PU and RIH W 550' of 9.3# 3 ½" 8rd tubing X-OVER RIH W/ Packer & 3500' 4 ½" P-110 11.6# tubing set packer @ 3500' land tubing EOT with 3 ½" stinger will be 4050'. 6. ND BOP NU WH 7. RD workover rig install flow lines start injecting. 8. Note the stinger will help keep the bad 7" casing from collapsing in. IWM should be able to run the injection well until a new well is drilled .Then possible side track this well and have two injection wells in good shape. 9. NOTE The collapse of 9.3# P-110 is 13530 PSI the J-55 9.3# that was in the well is 7400 PSI

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Nathan Robinson	435 454-4646	Director
SIGNATURE		**DATE**
N/A		1/10/2017

RECEIVED: Jan. 10, 2017

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL — OIL WELL ☐ GAS WELL ☐ OTHER WDW

8. WELL NAME and NUMBER: IWM SWD 3-30 B-4

2. NAME OF OPERATOR: Integrated Water Managment LLC

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE Ut ZIP 84001

PHONE NUMBER:

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 02S 04W U

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 1/9/2016	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☑ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☑ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Revised #2
Procedure Moving Ahead On the Stella 3-30 B4 SWD

1. Attempt to push fish to bottom was unsuccessful. The fish is an arrow set packer and 2 jts of 3 ½" tbg. We was not able to get the fish top past 4171'. IWM will have to leave the fish in the hole - other options is.
2. Fish moved to only 4171'
3. Recommendation moving forward for IWM
4. POOH W/ TBG & BHA.
5. PU and RIH W 550' of 9.3# 3 ½" 8rd tubing X-OVER RIH W/ Packer & 3500' 4 ½" P-110 11.6# tubing set packer @ 3500' land tubing EOT with 3 ½" stinger will be 4050'.
6. ND BOP NU WH
7. RD workover rig install flow lines start injecting.
8. Note the stinger will help keep the bad 7" casing from collapsing in. IWM should be able to run the injection well until a new well is drilled .Then possible side track this well and have two injection wells in good shape.
9. NOTE The collapse of 9.3# P-110 is 13530 PSI the J-55 9.3# that was in the well is 7400 PSI

NAME (PLEASE PRINT) Nate Robinson TITLE Managing Director

SIGNATURE DATE 1/9/2016

(This space for State use only)

INSTRUCTIONS

This form shall be submitted by the operator to show the intention and/or completion of the following:

- miscellaneous work projects and actions for which other specific report forms do not exist;
- all other work and events as identified in section 11, Type of Action, or as required by the Utah Oil and Gas Conservation General Rules, including:
  - minor deepening of an existing well bore,
  - plugging back a well,
  - recompleting to a different producing formation within an existing well bore (intent only),
  - reperforating the current producing formation,
  - drilling a sidetrack to repair a well,
  - reporting monthly the status of each drilling well.

This form is not to be used for <u>proposals</u> to

- drill new wells,
- reenter previously plugged and abandoned wells,
- significantly deepen existing wells below their current bottom-hole depth,
- drill horizontal laterals from an existing well bore,
- drill hydrocarbon exploratory holes such as core samples and stratigraphic tests.

Use Form 3, Application for Permit to Drill (APD) for such proposals.

NOTICE OF INTENT - A notice of intention to do work on a well or to change plans previously approved shall be submitted in duplicate and must be received and approved by the division before the work is commenced. The operator is responsible for receipt of the notice by the division in ample time for proper consideration and action. In cases of emergency, the operator may obtain verbal approval to commence work. Within five days after receiving verbal approval, the operator shall submit a Sundry Notice describing the work and acknowledging the verbal approval.

SUBSEQUENT REPORT - A subsequent report shall be submitted to the division within 30 days of the completion of the outlined work. Specific details of the work performed should be provided, including dates, well depths, placement of plugs, etc.

WELL ABANDONMENT - Proposals to abandon a well and subsequent reports of abandonment should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, and method of parting of any casing, liner, or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

In addition to any Sundry Notice forms submitted, **Form 8, Well Completion or Recompletion Report and Log** must be submitted to the division to report the <u>results</u> of the following operations:

- completing or plugging a new well,
- reentering a previously plugged and abandoned well,
- significantly deepening an existing well bore below the current bottom-hole depth,
- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: 3691

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER:
IWM SWD 3-30 B4

2. NAME OF OPERATOR:
INTEGRATED WATER MANAGEMENT LLC

9. API NUMBER:
43013507530000

3. ADDRESS OF OPERATOR:
PO Box 430 , Altamont, UT, 84001

PHONE NUMBER:
435-454-4646 Ext

9. FIELD and POOL or WILDCAT:
ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0300 FSL 0800 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 30 Township: 02.0S Range: 04.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

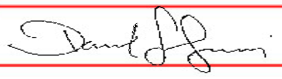
11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Approved by the Utah Division of Oil, Gas and Mining

Date: January 25, 2017

By: 

Please Review Attached Conditions of Approval

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Nathan Robinson	435 454-4646	Director
SIGNATURE		**DATE**
N/A		1/24/2017

RECEIVED: Jan. 24, 2017

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43013507530000

A copy of the log shall be submitted to the Division for review prior to commencing injection.

RECEIVED: Jan. 25, 2017

Sundry Number: 77696 API Well Number: 43013507530000

Reset Form

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

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5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

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8. WELL NAME and NUMBER: IWM SWD 3-30 B-4

2. NAME OF OPERATOR: Integrated Water Managment

9. API NUMBER: 4301350753

3. ADDRESS OF OPERATOR: PO Box 430 CITY Altamont STATE UT ZIP 84001

PHONE NUMBER:

10. FIELD AND POOL, OR WILDCAT: Altamont

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 0300 FSL 0800 FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 30 02S 04W U

STATE: UTAH

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☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 1/25/2017	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
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Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: RAT SURVEY
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

RAT survey in the well to confirm that no fluid is being injected in in the interval from the packer down to their permitted injection interval

NAME (PLEASE PRINT) Nate Robinson TITLE Managing Director

SIGNATURE DATE 1/24/2017

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

RECEIVED: Jan. 24, 2017

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- significantly deepening an existing well bore below the current bottom-hole depth,
- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

RECEIVED: Jan. 24, 2017